



LEAN SIX SIGMA FOR LEADERS

A practical guide for leaders
to transform the way
they run their organization

MARTIN BRENIG-JONES
JO DOWDALL

WILEY

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Foreword

Ian Swain, CEO, BQF

This is a different sort of Lean Six Sigma book, that not only guides leaders through the principles and the approaches, but provides case studies and stories from leaders who have used it. It goes beyond the theory and talks about practice, addressing real life challenges and considering Lean Six Sigma from a range of perspectives.

There is a lot more to Lean Six Sigma than problem solving and process improvement! The principles set out by Martin and Jo can underpin all aspects of leadership. These are in line with the fundamental concepts of excellence set out in the EFQM Excellence Model: adding value for customers; creating a sustainable future; developing organisational capability; harnessing creativity and innovation; leading with vision, inspiration and integrity; managing with agility; succeeding through the talent of people; sustaining outstanding results. Also aligned is the concept of applying learning, creativity and innovation to what an organisation does and how it does it, to improve what the organisation achieves.

This book also outlines how Lean Six Sigma can be used by leaders to support ‘other’ aspects of the leadership role which they may have thought to be separate or mutually exclusive. As the Agile movement grows for example, and its value is increasingly recognised outside of the world of software development, the book shows that it’s possible to harness both Agile and Lean Six Sigma, and do so with pragmatism.

Martin and Jo have also considered the fit with strategy deployment, process management, innovation and winning hearts and minds.

Managing change is a theme that runs through every section of this book, in leaders' stories and case studies especially. I would urge you to read this section! It's refreshing in its honesty and you're likely to recognise the circumstances and situations described. The stories are also shared with the benefit of hindsight, which we all know is a wonderful thing.

Years of experience are shared in the book. It doesn't matter what type of leader you are, or where you are, you should read it!

Preface

We've written this book for you, assuming that you are 'anyone in a leadership role in any kind of organisation' and that you are interested or intrigued to learn about the use of Lean Six Sigma. It's based on a heck of a lot of practical experience over many years, meeting and working with leaders in all sorts of positions, in all sorts of organisations, in all sorts of sectors!

Following on from the success of *Lean Six Sigma for Dummies* we were kindly invited to write this book by Wiley Publishing. I (Martin) must admit that I have often joked in executive workshops that given the title *Lean Six Sigma for Dummies* that book was written very much with executives in mind and you have taken this in good heart as you often do see yourselves as 'dummies' when it comes to this kind of thing. Of course, that isn't at all fair but what I have discovered is that you want to be able to pick up a book, read it through quickly, pick up the key points very much focused on your role as a leader, whilst not getting bogged down in the technical detail of different tools. You want to see how you and your organisation can use this 'stuff' – and by the way, you don't even have to call it 'Lean Six Sigma'. In fact, I was rather hoping the title would be 'Lean Six Sigma ... or whatever you want to call it ... for Leaders'. We will explain why, but most importantly we wanted to write a book that you could relate to, with plenty of real life examples, real case studies, from real leaders' perspectives.

So, Part I covers how Lean Six Sigma can be used (and is most frequently used) as an approach to solve problems – business problems, technical problems, production problems, HR problems, financial problems – any problems!

In Part II we look at how Lean Six Sigma principles can be applied in a variety of different ways including how Lean Six Sigma is increasingly being used to turn strategy into action. To be fair, this approach is more commonly linked to ‘Lean’ than ‘Six Sigma’ but we think this is ok, as we see Lean Six Sigma increasingly being an ‘umbrella’ which, nowadays at least, incorporates both Lean and Six Sigma (plus other useful ‘change’ tools, as we will see).

We also look at how Lean Six Sigma links to creating a process based system and everyday operations. Why not? It provides great foundations for running effective organisations, is focused on customers, how things get done (those processes), people involvement, and measuring results in a smart, sensible way using some nifty visual tools. We call this ‘Everyday Operational Excellence’ – you can call it whatever works well for you in your organisation!

We then look at the big and challenging subject of leadership and change, the people and cultural dimension – sorry but you can’t ignore it and, after all, isn’t this what it’s all about? Making improvements, making changes to the way work gets done in organisations – and that is all about CHANGE! This is critically important and not just in theory as you will see when you read the case studies at the end of the book, all written by leaders who have done it for real.

In between all this we have squeezed in chapters about how leaders can use Lean Six Sigma to create a system for innovation and design, integrate it with agile thinking, and apply it to make digital transformation more likely to deliver effective results.

In Part III, we look at how it is important to involve everyone and how leaders can work with different parts of the organisation – HR, employees, managers as well as practitioners. Admittedly we could continue ... But we wanted to make this book relatively ‘light’ and easy to read, taking a leaf out of our Dummies experience.

Finally, the case studies – and stories – and personal perspectives which we have gathered from a deliberately wide selection of leaders and organisations. You will see that these really come from the heart as well as the mind and it is interesting to see what these have in common, even across different organisations.

There aren't any rules about reading this book, if you are like me, you won't read it like a novel, for example, *Far from the Madding Crowd* – there is no big surprise at the end – so dip in and out, you might want to read the case studies first, or you might not.

Whichever way you read it, whoever you are, we hope you find it helpful.

Acknowledgements

I'd like to thank Martin Brenig-Jones for inviting me to co-author this book about Lean Six Sigma, and the team at Catalyst who constantly inspire me and the clients lucky enough to work with them. Thanks also to the clients I work with, who always teach me something new. They do say that if you choose a job you love you'll never have to work a day in your life ... I get that! And the biggest thanks to my friends and my brilliant family for their patience, amazing love and support. I'd like to dedicate this book (my parts of it!) to Buckley.

Jo

So many people have been fabulous in their support for us in writing this book.

First of all, a special mention has to go to Jo Dowdall who came in during the writing phase and has been an absolute godsend. I had seen Jo's great writing style from reading her famous quirky blogs. She has been absolutely brilliant, taking on so many ideas and writing so well and so fast with such good humour. We have worked really well together to the extent that we edit each other's work back and forth and it's now hard to tell who wrote what.

Second, I would like to thank all the other contributors: my other colleagues in Catalyst, particularly Vince Grant, Chris Merriman

and James Dwan but also Barbara Bird, Rita Green, Moore Allison, Mark Jones, Jim Stephenson, Rob Row, Helen Smith, Linda Nicholas and Marie Helene Vander Elst for their deep expertise and wisdom. I must also thank my past and present clients for their time in helping to write the case studies which I feel really bring the book to life. Huge thanks to Kevin Barrett and of course to Wayne Fisher, Rachel Angell, Beau Ormrod, Lorraine Daly, Mark Canning, and a particular thanks to Alec Gilbert, Mike Baddeley, and the amazing 'post it note' Derek Kennedy. Also to several others from organisations where I have shaped my thinking – Michelle Egan, Katie McConochie, Katie Brown, Rushmi Laidlaw, Klas Fischer, Sandra Nixon, Caroline Holyhead, Karen Leftley, Estelle Clarke, Guy Butler, Nick Mathias, Sue Smallwood-Brown. There are many others and I apologise if I have not mentioned you by name. Thank you all for your insights, your time and your wonderful words. I would also like to thank those colleagues in Catalyst who have listened to me and my ideas on phone calls, on train and car journeys, in particular Jenny Levers who acted as a sounding board for the initial ideas and structure for the book but also the great support from Elizabeth Wilkinson, Rosie Stone, and Charmaine Willetts.

Thank you also to Ian Swain, at the BQE, for his encouragement and for kindly agreeing to write the Foreword which is much appreciated.

I would also like to say how I have thought of the late John Morgan (my co-author on the Dummies book). He continues to be a great influence on my thinking, he may have gone but his ideas live on.

Finally, of course, I would like to thank my family, especially my wife, Di, who has had to put up with me being very bad at doing household chores over many months, with the continuing excuse that I have been writing this book. You have been a rock, a star and a great support. I promise to get out and get to work on the hedges.

I am not quite sure how many cups of tea have been consumed in the writing of this book, but I know it is a heck of a lot. I think you all deserve a glass of something bubbly!

Thank you.

Martin

PART



**Using Lean Six Sigma to Solve
Business Problems**

1

Introduction

Why this Book?

Another book about Lean Six Sigma?

Ah but this is different, it's about leadership and it is definitely not a technical book about the dark arts of black belts or advanced statistics. We hope you'll find it helpful no matter what kind of role you are in. We hope it will make you think that maybe there is more to this than you had thought. We hope you can put some of the ideas into practice. Come and join the party!

Let's start by trying out one of our favourite Lean Six Sigma tools, 'negative brainstorming' on that very subject – leadership.

If you haven't discovered it yet, this 'tool' (as Lean Six Sigma practitioners like to call techniques which can be employed to help facilitate workshops and the like) is really good fun – and it works.

So how do you use negative brainstorming?

In our experience there are two main steps. Firstly, grab a flipchart and pen, and say to the group 'Okay, so describe what good leadership looks like.'

This is a tough question and is likely to stall quickly, so before they get bogged down, say ‘Let’s turn the question around, what are the characteristics of really **bad** leadership?’

This inevitably creates a few chuckles around the room and immediately engages everyone including the negative diehards. Everyone seems to know what BAD leadership is like and they will have no trouble describing examples of it.

Here are a few examples from workshops we have run with senior executives:

- Being a poor communicator
- Dictating everything from above
- Not involving people in decision making
- Saying one thing and doing another
- Rubbishing a company programme
- Not living the company values
- Pushing blame down
- Jumping to solutions without any real facts.

You can add more to this list as there are sure to be plenty of ideas.

You will have real difficulty writing down their ideas fast enough and keeping up with them, so the second approach is to use Post-it notes and ask them to write down each idea on a separate note. Then you put them all onto a wall or flip chart. Personally, we both like getting them to shout out ideas as it creates a real buzz and it’s clear who is participating.

Once they have filled up at least one flip chart sheet, you say ‘Okay well we seem to be pretty good at this! However, what we really want is “excellent leadership” so let’s look at our collected notes and see if they can give us ideas by turning the negatives into positives.’

So, work down the list and literally change the negatives into positives.

Looking at the list above, this might become ...

- Being an excellent communicator
- Not being a dictator
- Involving people in decision making

- Doing what you say you will do
- Supporting company programmes
- Living the company values
- Not pushing the blame down!
- Not jumping to solutions without getting the facts.

You can continue with your list of negative ideas, turning each one around.

The discussion as a team is helpful, engaging and we have found this one simple ‘tool’ can really make a difference in getting teams involved and opening up thinking. We probably all know somewhere deep in our minds what the characteristics of good leadership look like but simply reversing the question seems to help dig out that thinking and gets a serious discussion going in a way which is more enjoyable. Maybe it is because we’re Brit and we are pretty expert at being negative about just about everything given half a chance; but underneath it we genuinely do want to be good leaders ourselves and we want to work with good leaders too.

Okay so negative brainstorming, it’s a great tool, try it in your next team meeting on ‘How can we run the worst team meeting ever!?’

Our experience with teams is that within 15 minutes you can run the negative idea generation and turn these ideas around into positive thoughts, create a ‘guidelines for effective team meetings’ flip chart which you can then use in future at YOUR team meetings. The team will buy into it too. After all, they were involved in its development.

I (Martin) wanted to start by illustrating that when you get under the somewhat weird and off-putting name, ‘Lean Six Sigma’, it may surprise you. If you can get beyond the odd name and any residual stigma or preconceived ideas you might have about Six Sigma being just about super high levels of quality, then there is a lot ‘under the bonnet’ of Lean Six Sigma which any manager or leader will find more than just useful.

With so many books written on the subject it may seem rather crazy to write another. However, from my experience working with many executive teams, what managers or leaders want to know is a little different from the rather technical descriptions that are covered in the traditional books on the subject.

I am often Asked the Question ‘What Exactly is Lean Six Sigma?’

Over the last few years it’s come to mean a number of things but, in reality, most organisations use it as a tried and tested approach to implement continuous improvement. In Catalyst, we use the name to encompass a wide range of methods, tools and techniques which have their origins in different histories and backgrounds. This range is developing and changing over time as more and more organisations build ever increasing experiences of using the approach in very different situations.

The latest most successful implementations of Lean Six Sigma – or whatever you want to call it (more on this later) – bring together thinking, principles, approaches, tools and techniques from the following:

- Lean thinking
- Six Sigma
- Change Management
- Agile and, most recently,
- ‘Digital Transformation’.

Lean Thinking

Let’s take a look at some of the background, starting with Lean. If you’d like a serious grounding in Lean and Six Sigma then pick up a copy of *Lean Six Sigma for Dummies*. When we wrote that book we wanted to ‘demystify’ the approach and make it accessible to everyone. We are going to paraphrase some of the basics here with the emphasis on the leadership aspects behind the approach.

When people talk about the roots of Lean thinking, the word ‘Toyota’ is often quoted. In fact, Toyota call their system ‘The Toyota Production System’. The concept of the word ‘Lean’ goes back to 1987, when John Krafcik who is now the CEO of Waymo (including the Google driverless car project) worked as a researcher in his earlier career at MIT. He was looking for a label for the Toyota Production System (TPS) phenomenon that described what the system did. On a whiteboard, he wrote the performance attributes of the Toyota system compared with traditional mass production.

TPS:

- Needed less human effort to design products and services.
- Required less investment for a given amount of production capacity.
- Created products with fewer delivered defects.
- Used fewer suppliers.
- Went from concept to launch, order to delivery and problem to repair in less time and with less human effort.
- Needed less inventory at every process step.
- Caused fewer employee injuries.

Krafcik commented:

It needs less of everything to create a given amount of value, so let's call it 'Lean'.

The Lean thinking world grew rapidly with the focus on reducing non-value-adding activities or waste. The Japanese word is *Muda*.

But, to sustain success, organisations need a lot more than knowledge about the tools and techniques. It all boils down to leadership. After all, it would not have taken root in Toyota if it hadn't had strong leadership commitment to create the environment needed to embed the principles and thinking into the **organisation as a system**. As Toyota chairperson Fujio Cho says:

The key to the Toyota way is not any of the individual elements but all the elements together as a system. It must be practised every day in a very consistent manner – not in spurts. We place the highest value on taking action and implementation. By improvement based on action, one can rise to the higher level of practice and knowledge.

As we said in *Lean Six Sigma for Dummies*: the system focuses on training to develop exceptional people and teams that follow the company's philosophy to gain exceptional results. Consider the following:

- Toyota creates a strong and stable culture wherein values and beliefs are widely shared and lived out over many years.
- Toyota works constantly to reinforce that culture.

- Toyota involves cross-functional teams to solve problems.
- Toyota keeps teaching individuals how to work together.

Being Lean means involving people in the process, equipping them to be able, and feel able, to challenge and improve their processes and the way they work. Never waste the creative potential of people!

All of the above has implications for leadership. It won't just happen without commitment and 'commitment' alone isn't enough either – you will need to stir it into action.

There is a lot more to Lean thinking but these five principles underpin the approach:

1. Understand the customer and their perception of value.
2. Identify and understand the value stream for each process and the waste within it.
3. Enable the value to flow.
4. Let the customer pull the value through the processes, according to their needs.
5. Continuously pursue perfection (continuous improvement – or Kaizen in Japanese).

Introducing Six Sigma

Lean has its origins in Japan, while Six Sigma has its roots in the US from the 1980s, when we can trace the origins back to Motorola. The then CEO Bob Galvin was struggling to compete with foreign manufacturers and Motorola set a goal of tenfold improvement in five years, with a plan focused on global competitiveness, participative management, quality improvement and training. Quality engineer Bill Smith coined the name of the improvement measurements: Six Sigma. All Motorola employees underwent training, and Six Sigma became the standard for all Motorola business processes.

The word soon spread around US major businesses into Allied Signal, and in the 1990s it reached the ears of Jack Welch, the dynamic CEO of General Electric (GE). Jack Welch was initially sceptical as he viewed Six Sigma as a 'Quality' programme but he agreed to pilot test

the approach insisting that all Six Sigma projects should have a clear measure of success. The expression Return On Six Sigma or ROSS was born. Within a few months it was clear that Six Sigma projects could return attractive financial (and other) benefits and Welch dictated the use of Six Sigma across the entire group of GE businesses.

So once again, it was strong leadership, albeit a very different style of leadership compared with Toyota (Jack Welch was known in GE as 'Neutron Jack'), that drove the initial success; and through the experience in GE the world learned that Six Sigma was far from 'just a quality programme' and also that the approach was proven to work in all kinds of businesses not 'just manufacturing'.

When Jack Welch introduced Six Sigma, he said:

We are going to shift the paradigm from fixing products to fixing and developing processes, so they produce nothing but perfection or close to it.

The recognition that it is the *process* that needs to be changed is central to both Lean and Six Sigma. We will come back to this!

Six Sigma enhances the Lean approach considerably.

For example, Six Sigma has strong roots – with measurement and data analysis extending an already great Lean toolkit by bringing a range of additional tools focused on how to measure, how much to measure and statistical tools, many of which are relevant for everyone in business or indeed leaders responsible for running any kind of organisation in whatever sector.

Six Sigma also brings a powerful problem-solving method which can easily be integrated with Lean tools. This method has now become the standard problem-solving approach for many organisations and has stood the test of time and application in all kinds of different sectors. The original thinkers in Motorola who devised the Six Sigma method must be astonished at how this approach has spread throughout the world and is still growing in popularity more than 30 years since it was first conceived.

We have occasionally heard leaders say that 'we are not ready for Six Sigma' and this is almost always down to confusion about the name.

When those statisticians in Motorola influenced the creation of the name ‘Six Sigma’ they had absolutely the right intentions with the aim of inventing a great aspirational goal for everyone to aim for – a very high level of quality. However, to understand exactly what they meant by Six Sigma requires a rather complicated, overly mathematical explanation which is likely to turn off many leaders before they reach a real understanding. To be honest it isn’t technically that relevant to a lot of applications of continuous improvement which can benefit so much from the principles behind Six Sigma and the tools underpinning it. The name stuck though and has entered the business vocabulary whether we like it or not.

It has put a lot of leaders off the whole approach though! This is a real shame as there is so much which is relevant to leading and running organisations today, especially as we enter a new digital transformation era.

Don’t get too worried about the name ‘Six Sigma’! It is an issue, we agree. Some of our clients feel strongly enough to use a different ‘brand’ instead of Lean Six Sigma – here is a selection which we have seen over the years:

- Operational Excellence
- Business Excellence
- Think Process
- Continuous Improvement
- Continuous Innovation
- Relentless Simplification
- For a Better Life

There are also ‘coded’ expressions that mean something specific for a particular organisation – like ‘e3’.

In all these cases when you look ‘under the bonnet’ you will find the same approaches, principles and tools which all come from the latest Lean Six Sigma stable. Make it work for you, adapt it for your organisation, make it fit so that people feel curious and want to join in.

One of the most powerful and common applications for Lean Six Sigma is to tackle business problems. We will look at this from a leadership perspective in the following chapters.

Lean Six Sigma Principles

Lean Six Sigma is based on a set of principles which are based on the roots mentioned above:

1. Focus on the customer
2. Identify and understand how the work gets done
3. Manage, improve and smooth the process flow
4. Remove non-value-add steps and waste
5. Manage by fact and reduce variation
6. Involve and equip people in the process
7. Undertake improvement activity in a systematic way

We will draw on these principles throughout this book.

