



Lean Sigma: A Practitioner's Guide

Ian Wedgwood PhD

Download now

[Click here](#) if your download doesn't start automatically

Lean Sigma: A Practitioner's Guide

Ian Wedgwood PhD

Lean Sigma: A Practitioner's Guide Ian Wedgwood PhD

The Practical, Easy-to-Use Guide to Lean Sigma Problem-Solving

Lean Sigma delivers results—if you use the right tools and techniques. In *Lean Sigma: A Practitioner's Guide*, Dr. Ian Wedgwood captures best-practice Lean Sigma experience from multiple projects and industries, helping any professional identify the solution that will work best—and *implement it*.

Wedgwood's exclusive "project roadmaps" present the fastest, most effective route to solving a wide range of problems—and explain *why* those solutions make sense. His "discovery roadmaps" help you identify potential Lean Sigma projects, even in processes where there are no obvious targets.

The heart of *Lean Sigma* is Wedgwood's 48 individual "tools roadmaps": step-by-step instructions revealing exactly how and when to use all these Lean Sigma tools...

- 5 Whys
- 5S
- Affinity
- ANOVA
- Boxplots
- Capability tools
- Cause & effect matrices
- Chi-Square
- Control charts
- Critical path analyses
- Customer tools
- Demand tools
- DOE tools
- Fishbone diagrams
- Handoff maps
- KPOVs
- Load charts
- MSA tools
- Multi-Cycle analyses
- Multi-Vari studies
- Murphy's analyses
- Normality tests
- OEE
- Pareto charts
- Poka Yoke
- Process FMEA
- Process variables (I/O) maps
- Project charter
- Pull systems & Kanban
- Rapid changeover

- Regression
- SIPOC
- Spaghetti maps
- SPC
- Swimlane maps
- Time tools

Whether you're a Green Belt, Black Belt, Master, Project Champion, Sponsor, Deployment Leader, or consultant, this book will help you use Lean Sigma to solve far more problems, far more rapidly, and far more effectively.

Dr. Ian Wedgwood, Executive Director of Sigma Breakthrough Technologies, has more than ten years of experience using, deploying, training, and consulting on Six Sigma and Lean Sigma. He has led and facilitated deployments in industries ranging from electronics and medical devices to chemicals and health care, and has trained and mentored numerous executives, champions, and belts. He holds a Ph.D. and First-Class Honors degree in Applied Mathematics from Scotland's St. Andrew's University.

Chapter 1 Introduction 1

PART I PROJECT ROADMAPS TO SOLVE BUSINESS PROBLEMS

Chapter 2 Define—Tools Roadmap Applied to the Beginning of All Projects 13

Chapter 3 Global Process Problems 23

- A: On-Time Delivery Issues 23
- B: Capacity of Process Is Too Low 27
- C: RTY, Defects, Accuracy, Quality, Scrap, and Rework Issues 29
- D: % Uptime Is Too Low 33
- E: Pace of Process Too Slow 36
- F: Process Has Enough Capacity, But Fails Intermittently 38
- G: Process Has Enough Capacity, But Process Lead Time Is Too Long 41
- H: Individual Steps Meet Takt, Global Process Does Not 44
- I: Demand from the Customer Is Too Variable 47
- J: Too Many Entity Types (Products) 51
- K: High Schedule Variation 54
- L: Measurement System Broken 60
- M: Performance Characteristic Not Good Enough 63
- N: Planned Maintenance Takes Too Long 64
- O: Setup/Changeover Takes Too Long 65
- P: Too Much Unplanned Maintenance 68
- Q: Process Can't Make Product at All 72
- R: Resource Usage Is Too High (Headcount Reduction) 75
- S: Inventory Is Too High 78
- T: Waste/Process Loss Too High 82
- U: High Forecast Variation 85
- V: Not Enough Sales 89
- W: Backlog of Orders Is Too High 91
- X: Payments Made to Suppliers Not Optimized 93
- Y: Accounts Receivable Are Too High 95

Chapter 4 Individual Step Process Problems 99

Chapter 5 Control—Tools Used at the End of All Projects 107

PART II ROADMAPS TO FIND PROJECTS WHERE NO OBVIOUS CANDIDATES EXIST

Chapter 6 Discovery—Tools Applied to Identify Projects 115

PART III ROADMAPS TO GUIDE IN THE PRACTICAL APPLICATION OF EACH LEAN SIGMA TOOL

Chapter 7 Tools 119

- 01: 5 Whys 119
- 02: 5S 122
- 03: Affinity 130
- 04: ANOVA 133
- 05: Box Plot 141
- 06: Capability—Attribute 143
- 07: Capability—Continuous 146
- 08: Cause & Effect (C&E) Matrix 153
- 09: Chi-Square 157
- 10: Control Charts 163
- 11: Critical Path Analysis 171
- 12: Customer Interviewing 174
- 13: Customer Requirements Tree 183
- 14: Customer Surveys 186
- 15: Demand Profiling 193
- 16: Demand Segmentation 196
- 17: DOE—Introduction 202
- 18: DOE—Screening 213
- 19: DOE—Characterizing 222
- 20: DOE—Optimizing 237
- 21: Fishbone Diagram 249
- 22: Handoff Map 253
- 23: KPOVs and Data 257
- 24: Load Chart 268
- 25: MSA—Validity 272
- 26: MSA—Attribute 276
- 27: MSA—Continuous 284
- 28: Multi-Cycle Analysis 294
- 29: Multi-Vari Studies 300
- 30: Murphy's Analysis 306
- 31: Normality Test 308
- 32: Overall Equipment Effectiveness (OEE) 311
- 33: Pareto Chart 318
- 34: Poka Yoke (Mistake Proofing) 321
- 35: Process FMEA 325
- 36: Process Variables (Input/Output) Map 330
- 37: Project Charter 333
- 38: Pull Systems and Kanban 342
- 39: Rapid Changeover (SMED) 354
- 40: Regression 362
- 41: SIPOC 372
- 42: Spaghetti (Physical Process) Map 376
- 43: Statistical Process Control (SPC) 380
- 44: Swimlane Map 384
- 45: Test of Equal Variance 389
- 46: Time—Global Process Cycle Time 392

47: Time—Individual Step Cycle Time	395
48: Time—Process Lead Time	398
49: Time—Replenishment Time	401
50: Time—Takt Time	404
51: Total Productive Maintenance	408
52: t-Test—1-Sample	411
53: t-Test—2-Sample	416
54: t-Test—Paired	422
55: Value Stream Map	423

 [Download Lean Sigma: A Practitioner's Guide ...pdf](#)

 [Read Online Lean Sigma: A Practitioner's Guide ...pdf](#)

Download and Read Free Online Lean Sigma: A Practitioner's Guide Ian Wedgwood PhD

From reader reviews:

Myrtle McDonald:

Book is to be different for each grade. Book for children until eventually adult are different content. As we know that book is very important normally. The book Lean Sigma: A Practitioner's Guide ended up being making you to know about other information and of course you can take more information. It is quite advantages for you. The guide Lean Sigma: A Practitioner's Guide is not only giving you more new information but also being your friend when you really feel bored. You can spend your personal spend time to read your e-book. Try to make relationship together with the book Lean Sigma: A Practitioner's Guide. You never really feel lose out for everything in case you read some books.

Brandon Justice:

Does one one of the book lovers? If yes, do you ever feeling doubt when you are in the book store? Try to pick one book that you find out the inside because don't determine book by its cover may doesn't work is difficult job because you are frightened that the inside maybe not while fantastic as in the outside appear likes. Maybe you answer can be Lean Sigma: A Practitioner's Guide why because the amazing cover that make you consider in regards to the content will not disappoint anyone. The inside or content is actually fantastic as the outside or cover. Your reading sixth sense will directly guide you to pick up this book.

Sophia Hardee:

This Lean Sigma: A Practitioner's Guide is completely new way for you who has curiosity to look for some information as it relief your hunger of knowledge. Getting deeper you upon it getting knowledge more you know or perhaps you who still having little digest in reading this Lean Sigma: A Practitioner's Guide can be the light food for yourself because the information inside this particular book is easy to get by means of anyone. These books produce itself in the form which is reachable by anyone, yeah I mean in the e-book form. People who think that in guide form make them feel tired even dizzy this e-book is the answer. So there is no in reading a e-book especially this one. You can find actually looking for. It should be here for a person. So , don't miss it! Just read this e-book style for your better life along with knowledge.

Earl Wright:

As a pupil exactly feel bored for you to reading. If their teacher requested them to go to the library or to make summary for some e-book, they are complained. Just minor students that has reading's soul or real their leisure activity. They just do what the trainer want, like asked to go to the library. They go to at this time there but nothing reading very seriously. Any students feel that looking at is not important, boring as well as can't see colorful photographs on there. Yeah, it is to get complicated. Book is very important for you. As we know that on this period, many ways to get whatever we wish. Likewise word says, ways to reach Chinese's country. Therefore this Lean Sigma: A Practitioner's Guide can make you feel more interested to read.

Download and Read Online Lean Sigma: A Practitioner's Guide Ian Wedgwood PhD #NKR6G7EL380

Read Lean Sigma: A Practitioner's Guide by Ian Wedgwood PhD for online ebook

Lean Sigma: A Practitioner's Guide by Ian Wedgwood PhD Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Lean Sigma: A Practitioner's Guide by Ian Wedgwood PhD books to read online.

Online Lean Sigma: A Practitioner's Guide by Ian Wedgwood PhD ebook PDF download

Lean Sigma: A Practitioner's Guide by Ian Wedgwood PhD Doc

Lean Sigma: A Practitioner's Guide by Ian Wedgwood PhD Mobipocket

Lean Sigma: A Practitioner's Guide by Ian Wedgwood PhD EPub