

Table of contents

Introduction	page 1
• Six Sigma	page 1
• Lean Methodology	page 3
• Kaizen Events approach	page 7
• The power of Lean Six Sigma	page 10
DEFINE	page 11
• SIPOC Diagram	page 13
• Process Mapping	page 16
– Basic Flow Diagram	page 17
– Functional Flow Diagram	page 18
– Value Added and Not Value Added	page 19
– Activity Flow Diagram	page 20
– Waste Walk	page 21
– Spaghetti Diagram	page 25
– Product Family Matrix	page 28
– Value Stream Mapping	page 30
• CTQ-Tree Diagram	page 44
• Kano Diagram	page 45
• Project Charter	page 46
• COPQ: Cost Of Poor Quality	page 48

Table of contents

MEASURE	page	51
• Sampling	page	53
• Basic Statistics	page	58
• Confidence Interval	page	66
• Graphical Summary	page	69
• Boxplot	page	76
• Gage R&R	page	81
• Gage R&R (Continuous Data)	page	83
• Gage R&R (Attribute Discrete Data)	page	95
• Pareto Diagram	page	103
• Normality Test	page	107
• Capability Analysis	page	111
• Calculation of DPMO	page	118
• Calculation of Process Sigma	page	119
• Takt Time	page	120
• Overall Equipment Effectiveness (OEE)	page	122
• Time Series Plot	page	128
• Run Chart	page	132

Table of contents

ANALYZE	page 137
• Cause-Effect Diagram	page 138
• Statistical Hypothesis Testing	page 145
– 1-Sample t	page 147
– 2-Sample t	page 151
– Paired t-Test	page 155
– ANOVA	page 160
– Chi-Square	page 164
– Test for Equal Variances	page 168
• Scatter Diagram	page 174
• Regression: Fitted Line Plot	page 178
• Regression: Analytical Approach	page 183
• Regression: Assumptions	page 186

Table of contents

IMPROVE

- 5S Program **page 187**
- Standard Work **page 189**
- Cell Design **page 195**
- SMED - Single Minute Exchange of Die **page 208**
- Kanban **page 213**
- Heijunka **page 221**
- TPM - Total Productive Maintenance **page 228**
- Priority Matrix **page 233**
- FMEA **page 237**
- DOE **page 242**
- DOE: Assumptions **page 247**
- **page 258**

CONTROL

- Control Chart **page 259**
- Control Chart for continuous variables: Individual **page 261**
- Control Chart for continuous variables : Xbar-R **page 262**
- Control Chart for attributes: P Chart **page 267**
- Poka Yoke **page 273**
- Visual Management **page 278**
- OPL One point Lesson **page 287**
- **page 293**

Table of contents

Lean Six Sigma Checklist	page 299
• Define Checklist	page 300
• Measure Checklist	page 301
• Analyze Checklist	page 302
• Improve Checklist	page 303
• Control Checklist	page 304
APPENDIX A: Process Sigma table	page 305
APPENDIX B: Kind of variables	page 307
APPENDIX C: Kaizen Leader Standard Form	page 308
Index	page 321
Glossary	page 325
References	page 333



<http://www.springer.com/978-88-470-2347-5>

Leading processes to lead companies: Lean Six Sigma
Kaizen Leader & Green Belt Handbook
Arcidiacono, G.; Calabrese, C.; Yang, K.
2012, XV, 334 p., Spiral binding
ISBN: 978-88-470-2347-5