

CONTENTS

Executive Summary	1
Introduction	2
What Is Lean?	3
The Lean Approach	7
Understanding Value vs. Waste	7
Value Stream Mapping (VSM)	8
Making the Process Flow	9
Pull	9
Continuous Improvement toward Perfection	10
Lean Concepts – The Context	11
Engaged Employees	11
Standard Processes and Operations	12
Top Management Leadership	12
Continuous Learning	13
The Toyota Way	13
Lean Tools and Techniques	14
5S's	14
Last Planner System®	17
Stopping the Production Line	20
Kaizen Event (Kaizen Blitz)	20
Kanban	21
Poka-Yoke	21
Process Mapping/Analysis	21
Rules of Release	22
Reduced Setup Time	23
“Spaghetti” Chart	23
Takt Time	24
Total Preventive Maintenance	24
Visual Control	25
Summary of Lean Tools	25

How to Become Lean	27
Define Value	27
Organize the Workplace	28
Go to Gemba and Watch	29
Establish Standard Procedures and Processes	29
Improve Management of Projects	30
Reduce Batch Size and Make the Product Flow	31
Remove Constraints in Product or Information Flow	32
Implement Pull	33
Implement Lean in Service	33
Who Is Doing Lean?	35
Barriers to Implementing Lean	37
Future Possibilities	39
Lean Enterprise	39
Submittal Day	40
Target Costing	40
Training within Industry	40
Zone Material Deliveries	40
Conclusion	41
Glossary of Terms	42
End Notes and References	44
Appendix A – Examples of Lean Companies	46
Appendix B – Where to Get Help	48
Appendix C – Lean Survey	49
About the Author	52