

Table of Contents

Abstract	3
Acknowledgements	5
Biographical Note	7
Part I: Introduction	
1: The Challenge To Be Solved	13
2: Key Findings of Project	17
3: Organization of Thesis	17
4: Literature Review	18
Part II: Traditional Methods Used for Manufacturing Process Design	
5: The Systematic Layout Planning (SLP) Design Process	24
6: Adding More to the SLP Process	31
7: The Traditional Manufacturing Process Design Methodology	39
8: The Foundational Elements of the Traditional Process Design Methodology	41
Part III: Case Illustrations Where The Traditional Design Methodology Was Used	
9: A Physical Flow Chart For The Production of An Automotive Ignition Coil	55
10: A Physical Flow Relationship Chart for a Formula One Racecar	59
11: A Physical Flow Block Layout Diagram For Krispy Kreme® Doughnuts	61
12: Designing a Manufacturing System for an Automotive Starter Motor Solenoid Subassembly	65
Part IV: Developing An Improved Process Design Methodology	
13: Shortcomings of the Traditional Process Design Methodology	81
14: Addressing the First Major Shortcoming: Ignoring the Flow of Information	82
15: Addressing the Second Major Shortcoming: The Overly Sequential Methodology	108
Part V: An Improved Process Design Methodology	
16: Description	119
17: Benefits of the Improved Process Design Methodology	122
Part VI: Case Illustrations Where The Improved Design Methodology Was Used	
18: An Informational Flow Chart For The Production of An Automotive Ignition Coil	125
19: A Informational Flow Relationship Chart for a Formula One Racecar	128
20: A Informational Block Layout Diagram for a Starter Motor Solenoid Subassembly	131
21: Designing a Manufacturing System for the DCS Pro 14n Digital Camera	132
Part VII: Conclusion	
22: Closing Comments	169
Bibliography	171
Appendix A: Eastman Kodak Company Overview	177
Appendix B: Digital Camera Market Overview	183
Appendix C: DCS Pro 14n Digital Camera Overview	187
Appendix D: How Information Has Transformed the Workflow of Professional Photography	191

Part I

Introduction

