Green Supply Chains

An Action Manifesto

Stuart Emmett and Vivek Sood



Contents

Forev	ix		
Prefa	×		
Abou	xvii		
Abou	About the authors		
Part	I: INTRODUCTION	, I	
Chap	ter 1: Introduction to Green Supply Chains	3	
1.1	Benefits of Green Supply Chains	6	
1.2	Traditional and Green Supply Chains	9	
1.3	Green Supply Chains and Corporate		
	Social Responsibility (CSR)	10	
1.4	Drivers of Green Supply Chain	12	
1.5	Green Supply Chain Framework	13	
Chap	ster 2: Impact on Bottom Line through Green		
Supp	ly Chains	. 17	
2.1	Key Contributors to the Profitability of		
	Green Supply Chains	17	
2.2	Construction Industry	19	
2.3	Logistics Industry	20	
2.4	Automobile Industry	21	
2.5	FMCG Industry	21	
2.6	Chemical Industry	22	

2.7	Electronics Industry	22
2.8	Conclusion	22
Appe	endix: Analytical Methodology and Details for	
	Cost-Benefit Analysis from Green Supply Chains	25
Part	2: GREEN SUPPLY CHAIN PLANNING	27
Chap	ter 3: Green Supply Chain Planning	29
3.1	Life Cycle Management	30
3.2	Benefits of Life Cycle Management,	30
3.3	Goals of Life Cycle Management	32
3.4	Green Sales and Operations Planning (S&OP)	38
	,	
Part	3: GREEN PROCUREMENT AND SOURCING	57
Chap	ter 4: Green Procurement	59
4.1,	Procurement Definitions, Aims, and Scope	59
4.2	Benefits of Green Procurement	63
4.3	Drivers of Green Procurement	67
4.4	Challenges	69
4.5	Factors Affecting Green Procurement	73
4.6	Moving towards Green Procurement	87
4.7	Reflections on Green Procurement:	
	Joined-up Thinking	88
Part	4: GREEN SUPPLY CHAIN EXECUTION	93
Chap	ter 5: Green Production	95
5.1	Benefits of Green Production	96
5.2	Drivers of Green Production	98
5.3	Challenges of Green Production	99
5.4	Key Components of Green Production	102
Chap	ter 6: Green Logistics	123
6.1	Drivers of Green Logistics	124
6.2	Benefits of Green Logistics	126

	CONTENTS	• vii
6.3	Challenges in Green Logistics	126
6.4	Moving towards Green Logistics	132
Chap	139	
7.1	Benefits of Green Packaging	142
7.2	Drivers of Green Packaging	143
7.3	Getting Started with Green Packaging	145
Chap	ter 8: Green Marketing	151
8.1	Importance of Green Marketing	152
8.2	Drivers of Green Marketing	153
8.3	Challenges in Green Marketing	157
8.4	Elements of Green Marketing	158
Chap	ter 9: Supply Loops	165
9.1	Examples of Supply Loops	, 166
9.2	Components of Supply Loops	168
9.3	Drivers of Supply Loops	175
9.4	Benefits of Supply Loops	178
9.5	Moving towards Supply Loops	179
Part	5: CARBON MANAGEMENT	181
•	ter 10: Carbon Footprint Minimization across	
the S	upply Chain	183
10.1	Carbon Measurement	186
10.2	Carbon Minimization	192
10.3	Carbon Monitoring	196
10.4	Carbon Reporting	196
Part	6: MIGRATION STRATEGY	199
Chapter II: Green Supply Chain Migration Strategy		201
11.1	Phase I, Detailed Analysis	205
11.2	Phase II, Design and Implementation	208
11.3	Phase III, Organizational Change Management	211

viii CONTENTS

	NTINUOUS IMPROVEMENT AND NCE EVALUATION	215
Chapter 12: 0	Green Supply Chain Continuous Improvement	217
12.1 Benefits	of Continuous Improvement in Green	
Supply (Chains	218
12.2 Prerequi	sites of Continuous Improvement	219
12.3 Method	ology of Continuous Improvement	219
12.4 Green S	Supply Chain Benchmarking	221
12.5 Pareto A	Analysis .	222
12.6 Example	e of Green Supply Chain Continuous	
Improve	ment	223
Chapter 13: (Green Supply Chain Performance Evaluation	225
13.1 Benefits	of Performance Evaluation	225
13.2 Performa	ance Evaluation Methodology	227
13.3 Presenti	ng Finding of Performance Evaluation	230
13.4 Using Ir	nformation from Performance Evaluation	
for Mak	ing Decisions	232
13.5 Measure	ment Toolkit	233
Part 8: APP	ENDIX – CASE STUDIES	235
Case Study 1:	Making an End-to-end Supply	
	Chain Green: the GFTN/WWF Initiative	235
Case Study 2:	Collaboration in Supply Chains	254
Case Study 3:	Green Reverse Supply Chain Waste and Kodak	263
Case Study 4:	Green Packaging and Reverse Logistics -	
	The Free Pack Net SRL Case Study	264
Case Study 5:	Chicago Climate Exchange	269
Case Study 6:	Green Grocery Stores in the Retail Sector	272
Case Study 7:	Product Design and Recycling and Sony	273
Case Study 8:	Renewable Energy and Geothermal	
	Power Usage	274
References and	l Bibliography	277
Index		279