

# Contents

Introduction.....	1
<b>PART I DREAM .....</b>	<b>3</b>
Chapter 1   Imagine It .....	5
Chapter 2   Work on the Big Picture .....	7
Chapter 3   Aim High .....	9
Chapter 4   BS! .....	11
Chapter 5   Brainstorm .....	13
Chapter 6   Create Desire .....	17
Chapter 7   Tell a Story .....	19
Chapter 8   Sleep on It .....	23
Chapter 9   Think JFK.....	25
<b>PART II JUDGE.....</b>	<b>27</b>
Chapter 10   Get Real.....	29
Chapter 11   Play Games.....	31
Chapter 12   Simulate It.....	35
Chapter 13   Run a Thought Experiment.....	37
Chapter 14   Know Your Limits .....	39
Chapter 15   Weigh Ideas .....	41
<b>Part III ASK.....</b>	<b>43</b>
Chapter 16   Ask Dumb Questions .....	45
Chapter 17   Ask Big Questions.....	47
Chapter 18   Ask “What If?” .....	51
Chapter 19   Ask: “Animal, Vegetable, or Mineral .....	55
Chapter 20   Ask Just One More Question .....	59

Part IV	CHECK.....	63
Chapter 21	Prove Yourself Wrong .....	65
Chapter 22	Inspect for Defects .....	67
Chapter 23	Have a Backup Plan.....	71
Chapter 24	Do a Sanity Test .....	73
Chapter 25	Check Your Arithmetic.....	75
Chapter 26	Know the Risks .....	77
Chapter 27	Question Your Assumptions.....	81
Part V	SIMPLIFY .....	83
Chapter 28	Keep It Simple, Stupid .....	85
Chapter 29	Draw a Picture.....	87
Chapter 30	Make a Mock-up .....	89
Chapter 31	Name the Beasts .....	93
Chapter 32	Look at the Little Picture.....	97
Chapter 33	Do the Math.....	99
Chapter 34	Apply Occam's Razor .....	101
Part VI	OPTIMIZE.....	103
Chapter 35	Minimize the Cost .....	105
Chapter 36	Minimize the Time .....	109
Chapter 37	Be Mr. Spock .....	113
Chapter 38	Make It Faster, Better, Cheaper (But Not All Three!) .....	115
Chapter 39	Know When Bigger is Better .....	117
Chapter 40	Let Form Follow Function .....	121
Chapter 41	Pick the Best People.....	125
Chapter 42	Make Small Improvements .....	127
Part VII	DO .....	129
Chapter 43	Learn by Doing .....	131
Chapter 44	Sharpen Your Axe .....	133
Chapter 45	Correct It on the Way .....	135
Chapter 46	Do Something .....	137
Chapter 47	Don't Ignore Trends .....	139
Chapter 48	Work on Your Average Performance .....	143

Chapter 49	Look Behind You .....	145
Chapter 50	Learn from Your Mistakes .....	147
Epilogue .....	149	
Recommended Viewing: The Greatest Sci-Fi Films of the Twentieth Century.....	151	
Recommended Reading and Bibliography .....	155	
About the Author .....	159	
About the Illustrator .....	161	
Index .....	163	