

CONTENTS

PREFACE xiii

ABOUT THE AUTHOR xviii

CHAPTER 1 The Nature of Information Technology Projects 1

Introduction 1

What Is a Project? 2

Project Attributes 2

What Is Project Management? 4

Projects, Programs, and Portfolios 4

Project Management and Information Technology 5

The State of IT Project Management 7

Why Many Projects Fail 8

Improving the Likelihood of Success 10

The Purpose of this Book 12

Chapter Summary 12

Review Questions 13

Husky Air—Pilot Angels 14

Husky Air Assignment 15

The Martial Arts Academy—School Management System 16

Quick Thinking—Involving the User 19

Quick Thinking—FAA Nextgen Air-Traffic

Control Project 20

Case Studies 20

Bibliography 23

CHAPTER 2 Project Methodologies and Processes 24

Introduction 24

The Project Life Cycle 25

The Project Management Body of Knowledge (PMBOK®) 27

Project Management Knowledge Areas 27

Project Processes 28

Project Management Process Groups 29

PRINCE2®	31
PRINCE2® Processes	31
PRINCE2® Themes	32
PRINCE2® Principles	33
The Systems Development Life Cycle (SDLC)	34
The PLC and the SDLC	35
Implementing the SDLC	35
Waterfall	36
Agile Systems Development	38
<i>What Is Agile?</i>	38
<i>Some Commonly Used Agile Methods</i>	40
<i>Waterfall versus Agile?</i>	41
Learning Cycles and Lessons Learned	42
Chapter Summary	46
Review Questions	48
Husky Air—Pilot Angels Assignment	50
Martial Arts Academy (MAA) Assignment	51
Quick Thinking—Learning from Failure	53
Quick Thinking—Doing Agile or Being Agile?	54
Case Studies	55
Bibliography	58

CHAPTER 3 Measurable Organizational Value and the Business Case 59

Introduction	59
Measurable Organizational Value (MOV)	60
The MOV and Project Objectives	61
Developing the MOV	62
The Business Case	67
What Is a Business Case?	67
Developing the Business Case	68
Project Selection and Approval	76
The IT Project Selection Process	76
The Project Selection Decision	76
Chapter Summary	77
Review Questions	77
Husky Air Assignment—Pilot Angels	78
The Martial Arts Academy (MAA)—School Management System	80
Quick Thinking—Measuring the Immeasurable	83
Quick Thinking—The Elevator Pitch	83
Case Studies	84
Bibliography	89

CHAPTER 4 Project Planning: The Project Infrastructure 91

Introduction	91
Project Governance	92
The Project Team	94
The Project Manager	94
The Project Team	95
The Organization and Project Planning	96
<i>The Functional Organization</i>	96
<i>The Project Organization</i>	99
<i>The Matrix Organization</i>	100
Procuring External Project Resources	101
Procurement Planning	102
Contracts Between Sellers and Buyers	103
The Project Environment	105
The Project Charter	105
What Should Be in a Project Charter?	106
<i>Project Identification</i>	106
<i>Project Stakeholders</i>	107
<i>Project Description</i>	107
<i>Measurable Organizational Value (MOV)</i>	107
<i>Project Scope</i>	107
<i>Project Schedule</i>	107
<i>Project Budget</i>	108
<i>Quality Standards</i>	108
<i>Resources</i>	108
<i>Assumptions and Risks</i>	108
<i>Project Administration</i>	108
<i>Acceptance and Approval</i>	109
<i>References</i>	109
<i>Terminology</i>	109
Chapter Summary	110
Review Questions	111
Husky Air Assignment—Pilot Angels	112
The Martial Arts Academy (MAA)—School Management System	113
Quick Thinking—The Project Sponsor	114
Quick Thinking—Projects as Social Networks	114
Case Studies	115
Bibliography	119

CHAPTER 5 Project Planning: Scope and the Work Breakdown Structure 120

- Introduction 120
- The Triple Constraint 121
- Defining and Managing Project Scope 122
 - Plan Scope Management 123
 - Collect Requirements 123
 - Define Scope 123
 - The Scope Boundary* 123
 - The Statement of Work (SOW)* 124
 - The Scope Statement* 124
 - Project-Oriented Scope* 125
 - Product-Oriented Scope* 125
- Validate Scope 128
- Control Scope 128
 - Scope Change Control Procedures* 129
- The Work Breakdown Structure (WBS) 130
 - Work Packages* 131
 - Deliverables and Milestones* 131
 - Developing the WBS* 132
- Project Estimation 134
 - Guesstimating* 134
 - Delphi Technique* 134
 - Time Boxing* 135
 - Top-Down Estimating* 135
 - Bottom-Up Estimating* 136
 - Poker Planning* 136
- Chapter Summary 138
- Review Questions 139
- Husky Air Assignment—Pilot Angels* 140
- The Martial Arts Academy (MAA)—School Management System* 141
- Quick Thinking—Sinking a Project* 142
- Quick Thinking—More People = More Problems* 143
- Quick Thinking—Politics and Estimates* 143
- Case Studies 144
- Bibliography 147

CHAPTER 6 Project Planning: The Schedule and Budget 149

- Introduction 149
- Developing the Project Schedule 151

Gantt Charts	151
Project Network Diagrams	153
Critical Chain Project Management (CCPM)	157
Project Management Software Tools	159
Developing the Project Budget	161
The Baseline Plan	163
The Kick-Off Meeting	164
<i>Chapter Summary</i>	164
<i>Review Questions</i>	166
<i>Husky Air Assignment—Pilot Angels</i>	166
<i>The Martial Arts Academy (MAA)—School Management System</i>	167
<i>Quick Thinking—Planning versus the Plan</i>	168
<i>Quick Thinking—The Map is Not the Territory</i>	168
<i>Case Studies</i>	169
<i>Bibliography</i>	172

CHAPTER 7 Managing Project Risk 173

Introduction	173
Create a Risk Plan	176
Identify Risks	176
A Project Risk Identification Framework	176
<i>Applying the Project Risk Identification Framework</i>	178
Other Tools and Techniques	179
Analyze Risk	182
Qualitative Approaches	183
Quantitative Approaches	186
Discrete Probability Distributions	186
Continuous Probability Distributions	186
Develop Risk Strategies	191
Monitor and Control Risk	193
Respond and Evaluate Response to Risk	193
<i>Chapter Summary</i>	194
<i>Review Questions</i>	196
<i>Husky Air Assignment—Pilot Angels</i>	197
<i>The Martial Arts Academy (MAA)—School Management System</i>	197
<i>Quick Thinking—Send in the Reserves</i>	198
<i>Quick Thinking—Risky Management</i>	199
<i>Case Studies</i>	200
<i>Bibliography</i>	204

CHAPTER 8 Managing Project Stakeholders and Communciation 205

Introduction	205
Stakeholder Analysis	206
The Informal Organization	206
Stakeholders	206
Stakeholder Analysis	206
Monitoring and Controlling the Project	207
The Project Communications Plan	209
Project Metrics	211
Burn-Down Chart	213
Earned Value	213
Analyzing Current Performance	216
Forecasting Project Performance	218
Reporting Performance and Progress	222
Information Distribution	222
<i>Chapter Summary</i>	223
<i>Review Questions</i>	224
<i>Husky Air Assignment—Pilot Angels</i>	225
<i>The Martial Arts Academy (MAA)—School Management System</i>	227
<i>Quick Thinking—Projects as Social Networks</i>	228
<i>Quick Thinking—Communication and Mentoring</i>	229
<i>Case Studies</i>	230
<i>Bibliography</i>	233

CHAPTER 9 Managing Project Quality 234

Introduction	234
Quality Philosophies	237
Craftsmanship	237
Scientific Management	238
The Total Quality Management (TQM) Gurus	238
Process Capability and Maturity	240
The Project Quality Management Plan	242
Quality Philosophies and Principles	242
Quality Standards, Processes, and Metrics	244
Quality Assurance	245
Quality Control	247
Continuous Improvement: Learn, Mature, and Improve	251
<i>Chapter Summary</i>	251
<i>Review Questions</i>	252
<i>Husky Air Assignment—Pilot Angels</i>	253
<i>The Martial Arts Academy (MAA)—School Management System</i>	253

<i>Quick Thinking—Why Do We Accept Low-Quality Software?</i>	254
<i>Quick Thinking—OPM3®</i>	254
<i>Case Studies</i>	255
<i>Bibliography</i>	259

CHAPTER 10 Leading the Project Team 260

Introduction	260
Project Leadership	261
Some Modern Approaches to Leadership	261
Leadership Styles	263
Emotional Intelligence	264
Ethics and Leadership	265
Ethical Leadership	266
Some Common Ethical Dilemmas in Projects	268
Making Sound Ethical Decisions	269
Teams and Leadership	270
Multicultural Projects	272
The Challenges of International Projects	272
Understanding Diversity	273
<i>Chapter Summary</i>	274
<i>Review Questions</i>	275
<i>Husky Air—Pilot Angels</i>	275
<i>The Martial Arts Academy (MAA)—School Management System</i>	276
<i>Quick Thinking—Leadership and Listening</i>	277
<i>Quick Thinking—Sitting Ducks</i>	277
<i>Case Studies</i>	278
<i>Bibliography</i>	281

CHAPTER 11 Managing Organizational Change, Resistance, and Conflict 282

Introduction	282
The Nature of Change	284
Change Has an Impact	284
Change Is a Process	285
Change Can Be Emotional	286
The Change Management Plan	287
Assess Willingness, Readiness, and Ability to Change	287
Develop or Adopt a Strategy for Change	289
<i>Rational-Empirical Approach</i>	289
<i>Normative-Reeducation Approach</i>	290
<i>Power-Coercive Approach</i>	290
<i>Environmental-Adaptive Approach</i>	291

Implement the Change Management Plan and Track Progress	291
Evaluate Experience and Develop Lessons Learned	292
Dealing with Resistance and Conflict	292
Resistance	292
Conflict	293
<i>Chapter Summary</i>	295
<i>Review Questions</i>	295
<i>Husky Air Assignment—Pilot Angels</i>	297
<i>The Martial Arts Academy (MAA)—School Management System</i>	298
<i>Quick Thinking—It's Not Easy Going Green</i>	299
<i>Quick Thinking—Cross-Functional and Multicultural Teams</i>	299
<i>Case Studies</i>	300
<i>Bibliography</i>	305

CHAPTER 12 Project Completion 306

Introduction	306
Product Release or System Implementation	307
Direct Cutover	307
Parallel	308
Phased	308
Project Closure	310
Project Sponsor Acceptance	312
The Final Project Report	312
The Final Meeting and Presentation	313
Administrative Closure	313
Project Evaluation	314
Individual Performance Review	314
Project Close-Out (Postmortem) Review	315
Project Audit	316
Evaluating Project Success—The MOV	316
<i>Chapter Summary</i>	317
<i>Review Questions</i>	318
<i>Husky Air Assignment—Pilot Angels</i>	319
<i>The Martial Arts Academy (MAA)—School Management System</i>	319
<i>Quick Thinking—Killing a Project</i>	320
<i>Quick Thinking—The Post-Implementation Audit</i>	320
<i>Case Studies</i>	321
<i>Bibliography</i>	324

APPENDIX: An Introduction to Function Point Analysis (Available online at www.wiley.com/college/marchewka)

INDEX 325