

Project Management

4th Edition

Steven M. Bragg

Table of Contents

Chapter 1 – Overview of Project Management	1
Learning Objectives	1
Introduction	1
Project Management Activities	1
The Need for Project Management	3
Program Management	3
Portfolio Management	4
Project Support	4
Project Sponsor	4
Project Stakeholders	4
Project Steering Committee	5
Resource Managers	5
The Customer	6
Impacted Employees	6
Force Field Analysis	6
The Project Team	7
The Impact of Organizational Structures on Projects	8
Stakeholder Management	9
The Notification Matrix	10
Managing Expectations	10
Resistance to Change	11
Summary	11
Review Questions	13
Review Answers	14
 Chapter 2 – Project Initiation	 15
Learning Objectives	15
Introduction	15
Triggering Conditions	15
Solution Analysis	15
Risk Analysis	16
Interdependency Analysis	16
Stakeholder Analysis	16
Other Factors to Consider	17
Requirements Analysis	17
Summary	18
Review Questions	19
Review Answers	20
 Chapter 3 – Project Selection	 21
Learning Objectives	21
Introduction	21
Qualitative Evaluations	21
Quantitative Evaluations	22
Payback Period	22
Discounted Payback	23
Internal Rate of Return	24
Net Present Value	24
Real Options	26
Capital Rationing	28
Summary	29
Review Questions	30
Review Answers	31

Table of Contents

Chapter 4 – Project Phases.....	33
Learning Objectives	33
Introduction.....	33
Phase 1 – Project Concept.....	33
Phase 2 – Project Definition	33
Phase 3 – Project Planning	34
Phase 4 – Preliminary Studies.....	34
Phase 5 – Project Performance.....	34
Phase 6 – Project Post-Completion.....	35
Additional Commentary on Project Phases.....	35
Overlapping Phases	35
Stopping a Project	36
Not Stopping a Project.....	36
Using a Reduced Number of Phases.....	36
Additional Topics.....	37
Project Charter	37
Project Scope.....	38
Statement of Work.....	38
Project Management Plan.....	40
Summary	40
Review Questions	42
Review Answers	43
 Chapter 5 – Project Planning	 45
Learning Objectives	45
Introduction.....	45
The Project Planning and Control System	45
The Work Breakdown Structure.....	46
Task Relationship Identification	48
Bottom-Up Estimating	50
Gantt Charts	52
Critical Path Method (CPM).....	52
Program Evaluation and Review Technique (PERT).....	55
Differences between CPM and PERT.....	56
Project Management Constraints	56
What-If Analysis	59
Staffing Management.....	59
Resource Leveling	59
Optimizing the Schedule	61
Summary	61
Review Questions	63
Review Answers	64
 Chapter 6 – Trade-Off Analysis.....	 65
Learning Objectives	65
Introduction.....	65
Project Constraints.....	65
Time Frame.....	66
Cost	66
Resources.....	66
The Final Variable	66
Scope	67
Scope Creep.....	67
Trade-Off Analysis	68
When No Additional Funds Are Available.....	68
When More Funds Are Available.....	69
Adjusting Project Scope	70

Table of Contents

Project Constraints at the Enterprise Level	71
Summary	72
Review Questions	73
Review Answers	74
Chapter 7 – Change Control.....	75
Learning Objectives	75
Introduction	75
Issue Management.....	75
Change Order Management.....	75
Levels of Change Notification.....	76
Configuration Management	76
Gold Plating Effects.....	77
Capping Changes	77
Consider Negative Effects.....	77
Summary	77
Review Questions	78
Review Answers	79
Chapter 8 – Project Close-Out	81
Learning Objectives	81
Introduction.....	81
Is the Project Finished?.....	81
Scope Analysis	81
Plan Analysis	81
Operational Analysis	82
Handoff Analysis	83
The Waived Suggestions List.....	83
Personnel Reviews	84
Summary	84
Review Questions	85
Review Answers	86
Chapter 9 – Project Estimating	87
Learning Objectives	87
Introduction.....	87
Estimating and the Nature of a Project	87
The Need for Specifications	88
Rough Order of Magnitude Estimates.....	88
Estimating Methods.....	88
Analogous Estimating.....	89
Apportionment Estimating.....	89
Bottom-Up Estimating.....	90
Parametric Estimating.....	90
Phased Estimating.....	91
Expert Judgment.....	91
Types of Contractor Billing Arrangements.....	91
Estimate Padding	92
Dealing with Pushback.....	92
Budgeting	93
Summary	93
Review Questions	94
Review Answers	95
Chapter 10 – Project Risk Management	97
Learning Objectives	97
Introduction.....	97

Table of Contents

Risk Management	97
Risk Identification	98
Risk Analysis	99
Risk Mitigation Tactics	100
Contingency Funding	101
Risk Logging	101
Summary	102
Review Questions	103
Review Answers	104
Chapter 11 – Project Quality Management	105
Learning Objectives	105
Introduction	105
Integration of Quality into a Project	105
Costs Impacted by Quality	105
Quality Assurance	106
Quality Tools	106
Control Charts	106
Pareto Charts	108
Cause-and-Effect Diagrams	108
Check Sheets	109
Root Cause Analysis	110
Summary	111
Review Questions	112
Review Answers	113
Chapter 12 – Project Procurement Management	115
Learning Objectives	115
Introduction	115
Procurement Management Plan	115
Supplier Selection Criteria	115
Supplier Financial Analysis	116
Supplier Capability Analysis	117
Supplier Responsiveness Analysis	118
Other Analysis Issues	118
The Bidding Process	119
Contents of a Bid Package	119
The Bidding Process Flow	120
Contract Pricing Arrangements	121
Firm Fixed Price	121
Fixed Price with Adjustments	121
Cost plus Pricing	122
Time and Materials Pricing	123
Summary of Pricing Arrangements	124
Make-or-Buy Analysis	124
Contract Terms and Conditions	124
The Employee or Contractor Designation	127
Contracts and Purchase Orders	128
Closing out Procurement Activities	128
Summary	129
Review Questions	130
Review Answers	131
Chapter 13 – Project Measurement and Reporting	133
Learning Objectives	133
Introduction	133
Work Package Measurement	133

Table of Contents

Progress Monitoring	133
Cost Variance Reporting	134
Labor Rate Variance	135
Purchase Price Variance	135
Variable Overhead Efficiency Variance	136
Fixed Overhead Spending Variance	136
The Cost and Schedule Performance Chart	137
Escalation Thresholds	138
Earned Value Management	139
Schedule Performance Index	140
Cost Performance Index	141
Project Close-Out	141
Measuring Non-Critical Activities	141
Measuring High-Volume Tasks	142
Measuring the Rate at Which Costs are Incurred	142
Project Reporting	142
Traffic Light Reporting	142
Management Reviews	143
Technical Reviews	143
Tollgate Reviews	143
Record Keeping	143
Summary	143
Review Questions	145
Review Answers	146
Chapter 14 – Project Management Best Practices	147
Learning Objectives	147
Introduction	147
Project Management Best Practices	147
Problem Escalation and Resolution	150
Megaproject Best Practices	150
Summary	151
Review Questions	152
Review Answers	153
Chapter 15 – Enterprise Project Management	155
Learning Objectives	155
Introduction	155
Enterprise Project Management	155
Types of Project Portfolios	156
The Flow of Projects	157
The Schedule of Future Projects	157
Chunking	158
The Project Management Office	158
Technology Requirements	161
The Corporate Knowledge Base	161
Summary	161
Review Questions	163
Review Answers	164
Chapter 16 – Special Subjects	165
Learning Objectives	165
Introduction	165
Innovation Projects	165
Agile Project Management	165
Incremental Delivery	167
Task Boards	168

Table of Contents

Burndown Charts.....	168
Dealing with Unfamiliar Situations	169
Milestone Analysis	170
The Crash Point.....	170
Fast-Tracking Issues.....	171
Avoidance of Escalating Doubts	171
Summary	172
Review Questions	174
Review Answers	175
Chapter 17 – Change Management.....	177
Learning Objectives	177
Introduction.....	177
When Change Initiatives Are Most Necessary	177
The Strategy of Change	178
The Impact of Lead Time on Change Initiatives	178
PEST Analysis	179
The Most Difficult Environments for Change.....	179
Change Management Pitfalls	180
Dealing with an Environment of Repeated Failures.....	181
Dealing with Adverse Motivations.....	181
How to Structure a Project to Succeed	181
Creating Wins	182
Drivers of Change	183
Tipping Point Leadership.....	183
Development Laboratories	184
Bottom-Up and Top-Down Change.....	184
The Impact of Turnover.....	185
The Impact of Prior Sales.....	185
Summary	186
Review Questions	187
Review Answers	188
Chapter 18 – Team Development.....	189
Learning Objectives	189
Introduction.....	189
What is a Team?.....	189
Issues Impacting Ineffective Teams.....	189
Identification of Team Members	190
Team Structure	191
Team Transitions	191
Communication Systems.....	191
Collaboration Issues.....	192
Team Emotional Intelligence	192
Team Engagement.....	194
Backup Planning	195
Conflict Resolution	195
Dealing with Counterproductive Behavior	196
Internal Conflict Resolution.....	196
Socialization Levels.....	197
Innovation Issues	197
The High-Performance Team	198
Team Duration	198
Team Termination.....	199
Characteristics of an Effective Team	199
Summary	200
Review Questions	201
Review Answers	202

Table of Contents

Chapter 19 – Team Management	203
Learning Objectives	203
Introduction	203
Management Style	203
Management Behavior	204
Listening Skills	205
Coaching Skills	205
Management's Treatment of Teams	206
Periodic Status Meetings	207
Milestone Analyses	207
Team Measurements	208
The Decision Making Process	208
Consensus Building	208
Incorrect Consensus Outcomes	209
Causes of Faulty Decisions	210
Group Pressure	210
Conformity	210
Decision Cascades	210
Polarization	210
Confidence	210
Improvements to the Decision Making Process	211
Deviant Thinking	211
Summary	211
Review Questions	212
Review Answers	213
Glossary	215
Index	219