

Joel Henry



SOFTWARE PROJECT MANAGEMENT

A Real-World Guide to Success

- Get help organizing the suggested approaches ▪
- Demystify software engineering concepts that may seem abstract ▪
- Figure out which tools are available to put management practices into use ▪

Contents

part one

Understand the Basics

1. Manage Your People	3
1.1 Managing Project Culture	4
1.2 Managing Good People	8
1.3 Making Good People Better	11
1.4 Leading Good People	17
Key Points / 19	Definitions / 19
Exercises / 21	Projects / 22
References / 23	Self Check / 20
	Further Information / 22
2. Implement Your Process	25
2.1 Putting a Process in Place	26
2.1.1 Tailoring a Process	29
2.1.2 Specifying a Process	33
2.2 Implementing a Process	37
2.3 Adopting an Agile Process	39
2.4 Assessing a Process	40
Key Points / 41	Definitions / 42
Exercises / 43	Projects / 46
References / 47	Self Check / 42
	Further Information / 46
3. Leverage Your Tools	49
3.1 Choosing Tools	50
3.2 Training to Use Tools	54
3.2.1 Training Time	55
3.2.2 Training Method	55

3.2.3 Training Content	57	
3.3 Leveraging Tools	58	
Key Points / 60	Definitions / 60	Self Check / 60
Exercises / 61	Projects / 61	Further Information / 62

4. Use Your Measurements 63

4.1 Selecting Measurements	64	
4.1.1 Measurements for All Projects	66	
4.1.2 Measurements for Specific Projects	75	
4.2 Planning Measurement	79	
4.3 Leveraging Measurements	80	
Key Points / 82	Definitions / 82	Self Check / 83
Exercises / 83	Projects / 85	Further Information / 85
References / 86		

part two

Prepare to Manage

5. Form Your Vision 89

5.1 Analyzing Stakeholders	90	
5.2 Balancing Project Needs	93	
5.3 Assessing Project Risks	96	
5.4 Specifying Project Payoffs	100	
5.5 Specifying and Communicating a Project Vision	102	
5.6 Examining a Case Study	105	
Key Points / 107	Definitions / 107	Self Check / 108
Exercises / 108	Projects / 109	Further Information / 109
References / 110		

6. Organize Your Resources 111

6.1 Identifying Hardware	112	
6.2 Identifying Software	114	
6.3 Identifying Support	116	
6.4 Examining a Case Study	118	
Key Points / 119	Definitions / 120	Self Check / 120
Exercises / 121	Projects / 121	Further Information / 122
References / 122		

7. Sketch Your Schedule**123**

7.1 Estimating Project Size and Effort	125
7.1.1 Function Points	126
7.1.2 COCOMO I	131
7.1.3 COCOMO II	136
7.2 Scheduling Immovable Milestones	142
7.3 Scheduling Synchronization Points	145
7.4 Facilitating Communication	148
7.5 Examining a Case Study	150
Key Points / 152	Definitions / 153
Exercises / 154	Project / 155
References / 156	Self Check / 154
	Further Information / 155

8. Write Your Plan**157**

8.1 Organizing the Plan	158
8.2 Covering All the Bases	164
8.2.1 Project Overview	164
8.2.2 High-Level Functionality	165
8.2.3 Project Staffing	166
8.2.4 Software Process	168
8.2.5 Schedule and Effort Estimates	169
8.2.6 Measurements	170
8.2.7 Risks	170
8.2.8 Software Tools	171
8.2.9 Hardware, Software, and Personnel Support	172
8.3 Reviewing the Plan	172
8.4 Examining a Case Study	174
Key Points / 176	Definitions / 176
Exercises / 177	Projects / 177
References / 178	Self Check / 176
	Further Information / 178

**part
three****Launch Your Project****9. Roll Out Your Roles****185**

9.1 Identifying Roles	186
9.2 Matching People to Roles	191
9.3 Highlighting Commitments and Dependencies	196

9.4 Examining a Case Study	199		
Key Points /	202	Definitions /	203
Exercises /	204	Projects /	205
References /	205	Self Check /	203
		Further Information /	205

10. Schedule Your Schedule **207**

10.1 Identifying and Scheduling Tasks	208		
10.1.1 Up-front Tasks	210		
10.1.2 Software Engineering Tasks	214		
10.2 Assigning Tasks to Roles	220		
10.3 Creating a Backup Plan	223		
10.4 Examining a Case Study	227		
Key Points /	228	Definitions /	229
Exercises /	230	Projects /	231
References /	232	Self Check /	230
		Further Information /	231

11. Get Your Support **233**

11.1 Getting Hardware Support	235		
11.2 Getting Software Support	238		
11.3 Getting Tool Support	240		
11.4 Examining a Case Study	243		
Key Points /	244	Definitions /	245
Exercises /	246	Projects /	246
		Self Check /	245
		Further Information /	247

12. Leaving the Starting Line **249**

12.1 Directing the Team	251		
12.2 Implementing the Technology	255		
12.3 Capturing the Measurements	258		
12.4 Monitoring the Project	262		
12.4.1 Cultural Status	263		
12.4.2 Engineering Status	265		
12.4.3 Task Status	267		
12.5 Examining a Case Study	269		
Key Points /	271	Definitions /	271
Exercises /	273	Projects /	273
References /	274	Self Check /	272
		Further Information /	273

part four

Manage to Stability

13. Monitor Your Project	277
13.1 Gathering Information	278
13.2 Understanding the Information	285
13.3 Avoiding Problems	292
13.4 Finding Solutions	296
13.5 Examining a Case Study	299
Key Points / 301	Definitions / 301
Exercises / 302	Projects / 303
References / 304	Self Check / 302
	Further Information / 303
14. Reschedule Your Schedule	305
14.1 Making the Schedule Important	306
14.2 Knowing when the Schedule Slipped	310
14.3 Rescheduling Correctly	314
14.4 Examining a Case Study	319
Key Points / 320	Definitions / 321
Exercises / 322	Projects / 322
References / 323	Self Check / 321
	Further Information / 323
15. Engineer a Great Product	325
15.1 Requiring Your Requirements	326
15.2 Designing in Quality	331
15.3 Implementing Smartly	337
15.4 Testing Effectively	341
15.5 Examining a Case Study	348
Key Points / 350	Definitions / 350
Exercises / 352	Projects / 353
References / 354	Self Check / 351
	Further Information / 354

part five

Complete a Project

16. Deliver Your System	357
16.1 Planning to Finish	358

16.1.1 Planning an Install	361	
16.1.2 Planning Deployment	365	
16.2 Finishing a Plan	369	
16.3 Supporting a Product	371	
16.4 Examining a Case Study	373	
Key Points / 374	Definitions / 375	Self Check / 376
Exercises / 376	Projects / 377	Further Information / 377
References / 377		

17. Assess Your Project **379**

17.1 Planning a Project Assessment	381	
17.1.1 Asking the Right Questions	382	
17.1.2 Examining Measurements and Information	383	
17.1.3 Allocating the Team	385	
17.1.4 Creating the Assessment Products	386	
17.1.5 Recording the Missing Information	387	
17.2 Analyzing Measurements	387	
17.3 Presenting the Assessment Results	393	
17.4 Examining a Case Study	395	
Key Points / 397	Definitions / 398	Self Check / 398
Exercises / 399	Projects / 399	Further Information / 399
References / 400		