Index

A
Acceptance criteria, 42
Acceptance of risk, 39, 224
Accountability, 120
Activities, 29
definition of, 182
duration estimation for, 185–186
resource estimation for, 184
sequencing of, 183–184
Activity on the arrow (AOA), 188
Actual cost, 198
Actual cost of work performed, 198
Ad hoc approach, 12
Administrative changes (procurement), 230
Administrative closure (integration management), 175
The Aggressor role, 124
Alpha risk, 203
Analogous estimates, 185, 191, 192
AOA (activity on the arrow), 188
Assumptions, 171–172, 216
Audits, quality, 202
Avoidance of risk, 38, 223

B
Backward pass, 187, 189
Benchmarking, 144, 201–202
Best practices, 12, 165
Beta risk, 203
Bidder conference, 228–229
Big picture view, 28, 44–48
The Blocker role, 124
Body of knowledge of project management, xi–xii, 4–5
compressed, 166–167
connecting PMBOK® Guide and, 166
in project management life cycle, 6
Bottom-up estimating technique, 184, 192
Brainstorming, 133, 222
Break-even analysis, 197
Budgeting, cost, 190
Business risk, 218–219
Business skills, 69

C
Cause and effect diagrams, 96, 204
Challenged projects, 68
Change control process, 105–118
basic elements of, 107–108
Change control process (continued)
configuration management in, 108
developing, 109–110
in executing process, 41
integrated, 98, 106, 108, 174
in *PMBOK® Guide*, 154
in Project Plan Accelerator, 114–118
scope control in, 181
steps in, 110–114
Change control team/board, 110, 174
Change management, 109–110, 194
Change management plan, 121
Checklist for managing projects template, 236–238
The Clarifier role, 125
Client acceptance plan, 121
Closing process, 13–14, 42–43
Closure work breakdown structure template, 249–250
Collaboration (in managing conflict), 207–208
Common sense, 165
Communications management, xv, 212–218
identifying stakeholders, 215
information distribution, 216–217
managing stakeholder expectations, 217
performance reporting, 217–218
planning communications, 215–216
possible areas for problems in, 214
in risk situations, 144
Communications requirements analysis, 215
Communications technology, 215
Company culture, 70
Compromise (in managing conflict), 207
Configuration management, 108, 174, 181
Conflict management, 123, 126, 207–208
Constraints, 171. *See also* Triple constraint
Constructive change, 230–231
Consumer’s risk, 203
Continuous improvement, 200
Contracts, 15, 170, 226–227
Contract closure, 175, 231
Control. *See* Change control process; Monitoring and control process
Control charts, 202–204
Control plans and processes, 37–38
Corrective actions (integration management), 173
Cost baseline, 194
Cost/benefit analysis, 201
Cost budgeting, 190, 194
Cost control, 190, 194–195
Cost estimating, 190–194
Cost management, xiv, 190–199
cost budgeting, 194
cost control, 194–195
cost estimating, 191–194
earned value formulas, 198–199
formulas for, 196–197
key terms associated with, 195–199
main processes for, 190
Cost of quality, 193, 200, 202
Cost plus fixed fee contracts, 226
Cost plus incentive fee contracts, 227
Cost plus percentage of cost contracts, 227
Cost variance, 198
Covey, Stephen, 73
CPM. See Critical path method
Crashing, 186
Critical chain, 187
Critical path, 189
Critical path method (CPM), 186–187, 189
Critical success factors (CSFs), 67. See also Success
Crosby, Phillip B., 201
CSFs (critical success factors), 67. See also Success
Culture, 70
Customer-supplier model, 9
Cutover plan, 121
CYA strategy, 141–144

D
Daily project log, 143
Decisions, about changes, 113
Decision tree analysis, 139, 140, 222
Decomposition, 179, 180, 182, 184
Defect repair review, 204
Deliverables, 8, 9, 29
in closing process, 42
in integration management, 175
risks associated with, 132–133
Delphi technique, 133, 222
Deming, W. Edwards, 200–201
Dependencies, 183
Design of experiments, 202
Destructive team roles, 123–126
The Devil’s Advocate role, 124
Direct costs, 197
Disaster recovery planning, 130
Disconnect plan, 121
Discretionary dependencies, 183
Documentation
of lessons learned, 108, 135
procurement, 228
in risk management, 144
The Dominator role, 124
Dummy activities, 188

E
Earned value management (analysis), 173–174, 188, 198–199
Earned value measurement, 195
Efficiency measures, 79
80/20 rule, 204
Eisenhower, Dwight D., 59
EMV (expected monetary value), 222–223
The Encourager role, 125
Endpoints, objectives as, 80
Endpoint words, 80–81
Enhancement of risk, 224
Enterprise environmental factors, 7, 70
defined, 153
as input, 15–16
in integration management, 171
in *PMBOK® Guide*
discussion of processes, 155–156
template for, 233–235
Environment, project, 151.
See also Enterprise environmental factors
Escalation plan, 121
Escalation process, project manager’s responsibility for, 120
See PMBOK® Guide

H
Hard logic dependencies, 183
The Harmonizer role, 125
Herzberg, Frederick, 211
Hierarchy of needs, 210–211
Histograms, 204
Historical records, in integration management, 171
Human resources, as enterprise environmental factor, 70
Human resource management, xiv, 205–212
motivation, 210–212
organizational structure, 205–206
risks in, 136
team development, 209–210
tools and techniques for, 207–209
types of power, 206–207
Hurwitz criteria, 221

I
Impact analysis, 106–107, 112–113
Implementation plan, 121
Incentives (procurement), 230
Incremental estimates, 192
Indirect costs, 197
Industry standards, 70
Information distribution, 216–217
The Information Giver role, 125
The Information Seeker role, 125
Initiating process, 12–13, 32–36
The Initiator role, 125
Inputs, 6–8, 14–16, 78
Inspections, quality, 203
Insurable risk, 218

Estimation, 185
of activity duration, 185–186
of activity resources, 184
cost, 190–194
Executing process, 13, 41–42
Expected monetary value (EMV), 222–223
Expert judgment, 17–18
Expert power, 206
Exploitation of risk, 224
External factor dependencies, 183

F
Failed projects, 68
Fast tracking, 186
Feedback, from project team, 143
FFP (firm fixed price) contracts, 226
Financial investments, projects as, 66
Firm fixed price (FFP) contracts, 226
Fishbone diagrams, 96, 204
Fixed price incentive fee contracts, 227
Float, 187, 189
Flowcharts, 204
Flowcharting, 202
Forcing (in managing conflict), 207
Forecasting, 195
Formal power, 206
Forming (teams), 209
Forward pass, 187, 189
Functional organizations, 205
Future value, 196

G
The Gate Keeper role, 125
Goals, 11–12, 81, 82, 84–85
Government standards, 70
Integrated change control, 98, 106, 108, 174

Integration
in change management, 106, 108

PMBOK® Guide overview chart for, 153
in project management life cycle, 6
of subprocesses, 29–32
through processes, 12–14, 163–164

Integration management, xiv, 28, 167–175
as key to success, 151
as overarching knowledge area, 169

PMBOK® Guide chapter on, 152, 154
terms/processes associated with, 170–175

Internal rate of return (IRR), 197

Interpersonal skills, 69

ISO 9000/2000, 201

J

Jeopardy report template, 247–248
Juran, Joseph M., 201

K

Kerzner, Harold, 123

Key performance indicators (KPIs), 67. See also Success

Kickoff meeting, 120, 126

Knowledge areas, xiv–xv. See also Body of knowledge of project management inputs, tools and techniques, and outputs associated with, 9–10

integration of, 9, 10
as parts of a system, 152
processes for integration of, 12–14
in project management life cycle, 6
relationship of process groups and, 163–164

KPIs (key performance indicators), 67. See also Success

L

Leadership skills, 210–212
Learning curves, 195–196

Legitimate power, 206

Lessons learned
for change control, 114
documenting, 108, 135
for methodologies and PMO, 61
in monitoring and control process, 97
in review process, 43
in risk management, 135–136

Letters of intent, 227
Lewis, James P., 69

Life cycle, project management, 6

Life cycle costing, 193–194

Listening, as greatest success factor, 72–73

Lump sum contracts, 226

M

McGregor, Douglas, 211

Make or buy decisions, 228

Management skills, 69–70, 151
Management summaries, 143

Managing stakeholder expectations, 217

Mandatory dependencies, 183
Index

Nominal group technique, 133, 222
Norming (teams), 210

O
Objectives, 13, 80–82
Ono, Dan, 165
Operations, administration, and maintenance plan, 121
Opportunity cost, 197
Organizational culture, 70
Organizational process assets, 7, 153
as input, 16
in integration management, 171
in PMBOK® Guide discussion of processes, 156
Organizational risk tolerances, as enterprise environmental factor, 70
Organizational strategies, in integration management, 172
Organizational structure, 205–206
Outcomes measures, 78
Outputs, 8, 14, 18, 78
Overview charts (in PMBOK® Guide), 154–155, 191

P
Parametric estimates, 185, 192
Pareto diagrams, 204
Payback period, 197
PDM. See Precedence diagramming method
Peers, discussing projects with, 143
Penalty power, 206
Performance measures, 77–91
characteristics of, 86
defining, 83–85
development of, 82–88
efficiency, 79

N
Napoleon, 59
Needs analysis, 58–59
Negotiation, 120, 209, 229
Net present value, 196–197
Network diagrams, 186–187
New Product Development Body of Knowledge, 166

Martin, Paula, 132
Maslow, Abraham, 210
Maslow’s hierarchy of needs, 210–211
Master schedule, project manager’s responsibility for, 120
Matrix organizations, 206
Meetings, 120, 126
Menninger, William, 65
Methodologies, 2–3, 57–64
development of, 60–61
in integration management, 173
in Project Plan Accelerator, 62–64
questions for needs analysis, 58–59
tools and techniques for, 16–17
Mitigation of risk, 38, 224
Mitigation plans, 143
Monitoring and controlling process group, 130
Monitoring and control process, 13, 93–103
for cost control, 190, 194–195
process of, 94–99
project manager’s responsibility for, 120, 121
in Project Plan Accelerator, 99–103
Monte Carlo simulations, 139, 223
Motivation, 210–212
Motorola, 201
examples of, 85–86
input, 78
outcome, 78
output, 78
and performance metrics, 87–88
in Project Plan Accelerator, 88–91
quality, 79
and setting of objectives, 80–82
Performance metrics, 58, 87–88
Performance reporting, 217–218
Performing (teams), 210
Personal skills, 69
PERT (program evaluation review technique), 190
Planned value, 198
Planning process, 13, 36–41, 49–50
Planning process group, 130
PMBOK® Guide, xii–xiii
communications management in, 212–218
cost management in, 190–199
fourth edition, 168–170
as framework for plans, 19
human resource management in, 205–212
integration management in, 167–174
knowledge areas in, xiii–xiv, 4–5, 27–28
as planning tool, 157–161. See also Project Plan Accelerator processes, tools, and techniques in, 5–10
procurement management in, 224–231
quality management in, 199–205
risk management in, 219–224
scope management in, 175–181
strategy for reading and using, 152–157
third edition, 168
time management in, 181–190
PMBOK® orientation, xiii
“PMBOK® Way,” 2
PMI Way, 2
PM Network magazine, 132
PMO (project management office), 60–61
PMP exam. See Project Management Professional exam
Power, types of, 206–207
PPA. See Project Plan Accelerator
Precedence diagramming method (PDM), 183–184, 188
Present value, 196
Preventive actions, in integration management, 173
Preventive measures (risk), 143
Probability distributions, 223
Probability/impact matrix, 133, 220
Processes (process groups), 11–14, 29–32. See also Specific processes
ad hoc approach to, 12
closing, 42–43
executing, 41–42
initiating, 32–36
integration of, 9
interactions among, 14
planning, 36–41
in PMBOK® Guide, 5–6
relationship of knowledge areas and, 163–164
Process analysis, 202
Procurement documents, 228
Procurement management, xv, 224–231
contract types, 226–227
processes in, 225
tools and techniques of, 228–231
Producer’s risk, 203
Professional and social responsibility domain, 217
Programs, 10
Program evaluation review technique (PERT), 190
Progressive elaboration, 13
Projects, 10
Project budget, 37, 121
Project charter, 18, 34–36, 235–236
Project closeout, 42–43
Project environment, 151.
See also Enterprise environmental factors
Project interfaces, 208
Projectized organizations, 206
Project management
checklist template for, 236–238
common sense in, 165
general principles of, 3
knowledge base for, 4. See also
Body of knowledge of project management
methodologies for, 17
principles of, 10–11
Project Management (Harold Kerzner), 123
Project management information system, 17, 172–173
The Project Management Institute, xii
Project management life cycle, 6
Project management office (PMO), 60–61
Project management plan, 173
Project Management Professional (PMP) exam, xii, xvi, 167
Project management skills, 69–70
Project managers
as “general” managers, 70–71
in ideal world vs. in practice, 28–29
roles and responsibilities of, 120–123
Project Plan Accelerator (PPA), xvi, 20–26
big picture in, 44–48
change control process in, 114–118
function of, 20–21
methodologies in, 62–64
monitoring and control in, 99–103
performance measures in, 88–91
and PMBOK® Guide as planning tool, 157–161
risk management in, 144–149
roles and responsibilities in, 126–128
success in, 73–75
SWOT analysis in, 52–55
Project plans
integration of elements in, 164
in monitoring and control process, 94
strategic plans vs., 11
as unique, 165
Project reviews, 42, 43, 231
for risk management, 144
template for, 238–242
Project schedule, 37
Project scope statement. See Scope statement
Project selection
in initiating process, 33–34
in integration management, 171
methods for, 16–17
Project team
  project manager’s responsibility for, 120
  in risk management planning, 131, 143
  roles and responsibilities of, 123–126
Punch list, 42

Q
  Qualitative analysis, 219
  Quality assurance, 202
  Quality assurance plan, 121
  Quality control, 203–205
  Quality management, xiv, 199–205
    planning quality, 199–202
    quality assurance, 202
    quality control, 203–205
  Quality measures, 79
  Quality planning, 199–202
  Quality plan template, 250–253

R
  RAM. See Responsibility assignment matrix
  Ramp-up/down time, 185
  Rapid knowledge development (RKD), 163–231
    communications management, 212–218
    cost management, 190–199
    human resource management, 205–212
    integration management, 167–175
    procurement management, 224–231
    quality management, 199–205
    risk management, 219–224
    scope management, 175–181
    time management, 181–190
  RBS (Risk Breakdown Structure), 136
  Recognition, 13, 41, 43–44
  The Recognition Seeker role, 124
  Referent power, 206–207
  Rejected changes, 108, 112
  Rent vs. lease analysis, 228
  Requirements collection and management, 177–178
  Reserve analysis, 193
  Resource calendar, 184
  Resource leveling, 188
  Resource pools, 184
  Responsibility assignment matrix (RAM), 38, 39, 208
    project manager’s responsibility for, 120
    team roles assigned through, 123
  Reviews. See Project reviews
  Reward and recognition events, 41, 43–44
  Reward power, 206
  Risk Breakdown Structure (RBS), 136
  Risk categories, 136–138
  Risk management, xv, 129–149, 219–224
    basic process of, 132–134
    best strategy for, 131–132
    categories of risk, 136–138
    CYA strategy for, 141–144
    key elements of, 219–221
    lessons learned in, 135–136
    in Project Plan Accelerator, 144–149
    risk identification process, 221–222
    risk response strategies, 223–224
    techniques used in, 139–141
    template for, 137–138, 253–258
Risk management (continued)
tools and techniques for, 222–223
value of, 130–131
Risk management plan, 131
Risk planning
in planning process, 38–41
SWOT analysis in, 49
Risk ratings, 133–134
Risk reduction process, 143
Risk responses, 38–39
Risk tolerances, 70, 221
RKD. See Rapid knowledge development
Roles and responsibilities,
119–128
assigning, 119–120
obtaining agreement on, 119
in planning process, 38
of project manager, 120–123
in Project Plan Accelerator, 126–128
of project team, 123–126
Rolling wave planning, 182
Run charts, 204

S
Safety plan, 121
Sandia National Laboratories, 83
Scatter diagrams, 204
Schedules
control of, 187–188
development of, 186–187
project manager’s responsibility for, 120
Schedule baseline, 187
Schedule compression, 188
Schedule performance index (SPI), 199
Schedule variance, 198
Scope creep, 38
Scope definition, 178–179
Scope management, xiv,
175–181
control of scope, 181
definition of scope, 178–179
process flow for, 7
risks in, 136
scope planning, 176–178
verification of scope, 180
WBS creation, 179–180
Scope planning, 176–178
Scope statement, 36–37, 179
objectives in, 80
project manager’s responsibility for, 120
template for, 242–246
Screening (procurement), 229–230
Sender-receiver model, 213
Sensitivity analysis, 139
Sharing of risk, 224
Six Sigma, 201
Slack, 187, 189
SMART objectives, 81, 82
Smoothing (in managing conflict), 207
Soft logic dependencies, 183
Special terms and conditions (procurement), 230
SPI (schedule performance index), 199
Sponsors, 110
Staffing of projects, 208
Stakeholders, 212
defined, 172
identifying, 215
managing expectations of, 217
Standards, 70
Standard deviation, 223
Standish Group, 67–68
Statement of work, 15, 228
Statistical sampling, 203
Status reports, 143
Storming (teams), 209–210
Strategic planning, 11–12, 49
Subprocesses, 29–32
Subsidiary plans, 40–41, 121, 174–175
Success, 65–75
customer-defined, 73
definition of, 67
factors in, 67–73, 151
formula for, 19–20
integration for, 151–152
measuring, 71
PMBOK® Guide as foundation for, 20
and project constraints, 65–66
and project environment, 151
in Project Plan Accelerator, 73–75
Standish Group recipe for, 68–69
Sunk costs, 197
Supportive team roles, 123, 125–126
SWOT analysis, 49–55
eample of, 50–52
in Project Plan Accelerator, 52–55
in risk management, 133, 222
Systems approach to project management, 152, 164

T
Taguchi, Genichi, 202
Task level planning, 182
Tate, Karen, 132
Team-based risk assessment, 132–134
“Team Based Risk Assessment” (Paula Martin and Karen Tate), 132
Team development, 209–210
Templates, 233–258
charter, 235–236
checklist for managing projects, 236–238
closure work breakdown structure, 249–250
enterprise environmental factors, 233–235
jeopardy report, 247–248
quality plan, 250–253
reviews, 238–242
risk management, 137–138, 253–258
scope statement, 242–246
Termination due to default, 230
Termination for convenience, 230
Testing and acceptance plan, 121
Testing skills, 70
Theory of constraints, 187
Theory X, 211
Theory Y, 211
Three point estimating, 185, 186
Time management, xiv, 181–190
activity definition, 182
activity duration estimating, 185–186
activity resource estimation, 184
activity sequencing, 183–184
network diagram terms and acronyms, 188–190
risks in, 136
schedule control, 187–188
schedule development, 186–187
Tools and techniques, 8, 16–18
for defining activities, 182
in describing process interactions, 14
in PMBOK® Guide, 5–6
Top down estimates, 185
The Topic Jumper role, 124
Total quality management (TQM), 201
Training plan, 121
Transfer of risk, 38, 39, 223
Triple constraint, 65–66, 106, 164–165
Two-boss syndrome, 206

U
Uncertainty, 219–220
Unknowns, 220

V
Variances, monitoring and control of, 95–97
Variance analysis, 181, 195
Vendor bid analysis, 193
Verification of scope, 180

W
Wald criteria, 221
WBS (work breakdown structure), 37
Weighted average estimates, 185–186
Weighting system (procurement), 229
What-if scenarios, 143, 187, 188
Withdrawal (in managing conflict), 207

Y
Young, Ralph R., 178