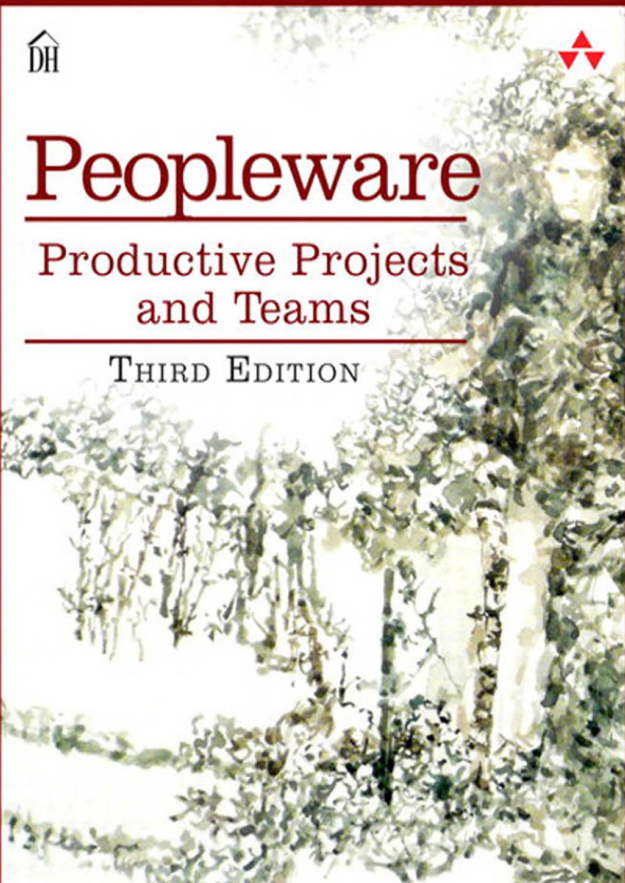




Peopleware

Productive Projects
and Teams

THIRD EDITION

A watercolor illustration of several trees with green and yellowish leaves, set against a light background. The style is soft and painterly.

Tom DeMarco
&
Timothy Lister

FREE SAMPLE CHAPTER



SHARE WITH OTHERS

Peopleware

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Peopleware

Productive Projects and Teams

Third Edition

Tom DeMarco
Timothy Lister

◆◆Addison-Wesley

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*The Great Oz has spoken.
Pay no attention to that man behind the curtain.
The Great Oz has spoken.
—The Wizard of Oz*

*To all our friends and colleagues who have shown us
how to pay no attention to the man behind the curtain.*

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Contents

<i>Preface</i>		xv
<i>About the Authors</i>		xvii
Part I	Managing the Human Resource	1
Chapter 1	Somewhere Today, a Project Is Failing	3
	The Name of the Game	4
	The High-Tech Illusion	5
Chapter 2	Make a Cheeseburger, Sell a Cheeseburger	7
	A Quota for Errors	8
	Management: The Bozo Definition	8
	The People Store	9
	A Project in Steady State Is Dead	10
	We Haven't Got Time to Think about This Job, Only to Do It	11
Chapter 3	Vienna Waits for You	13
	Spanish Theory Management	13
	And Now a Word from the Home Front	14
	There Ain't No Such Thing as Overtime	15
	Workaholics	15
	Productivity: Winning Battles and Losing Wars	16
	Reprise	17

Chapter 4	Quality—If Time Permits	19
	The Flight from Excellence	20
	Quality Is Free, But . . .	22
	Power of Veto	23
Chapter 5	Parkinson's Law Revisited	25
	Parkinson's Law and Newton's Law	25
	You Wouldn't Be Saying This If You'd Ever Met Our Herb	26
	Some Data from the University of New South Wales	27
	Variation on a Theme by Parkinson	29
Chapter 6	Laetrile	31
	Lose Fat While Sleeping	31
	The Seven Sirens	32
	This Is Management	34
Part II	The Office Environment	35
Chapter 7	The Furniture Police	37
	The Police Mentality	38
	The Uniform Plastic Basement	38
Chapter 8	"You Never Get Anything Done around Here between 9 and 5."	41
	A Policy of Default	42
	Coding War Games: Observed Productivity Factors	43
	Individual Differences	44
	Productivity Nonfactors	45
	You May Want to Hide This from Your Boss	46
	Effects of the Workplace	47
	What Did We Prove?	48
Chapter 9	Saving Money on Space	49
	A Plague upon the Land	50
	We Interrupt This Diatribe to Bring You a Few Facts	51
	Workplace Quality and Product Quality	52
	A Discovery of Nobel Prize Significance	53
	Hiding Out	54
Intermezzo	Productivity Measurement and Unidentified Flying Objects	57
	Gilb's Law	58
	But You Can't Afford Not to Know	59
	Measuring with Your Eyes Closed	59

Chapter 10	Brain Time versus Body Time	61
	Flow	61
	An Endless State of No-Flow	62
	Time Accounting Based on Flow	63
	The E-Factor	64
	A Garden of Bandannas	65
	Thinking on the Job	65
Chapter 11	The Telephone	67
	Visit to an Alternate Reality	67
	Tales from the Crypt	69
	A Modified Telephone Ethic	70
	Incompatible Multitasking	71
Chapter 12	Bring Back the Door	73
	The Show Isn't Over Till the Fat Lady Sings	73
	The Issue of Glitz	74
	Creative Space	75
	Vital Space	76
	Breaking the Corporate Mold	77
Chapter 13	Taking Umbrella Steps	79
	Alexander's Concept of Organic Order	80
	Patterns	82
	The First Pattern: Tailored Work Space from a Kit	84
	The Second Pattern: Windows	84
	The Third Pattern: Indoor and Outdoor Space	87
	The Fourth Pattern: Public Space	87
	The Pattern of the Patterns	88
	Return to Reality	88
Part III	The Right People	91
Chapter 14	The Hornblower Factor	93
	Born versus Made	93
	The Uniform Plastic Person	94
	Standard Dress	95
	Code Word: <i>Professional</i>	96
	Corporate Entropy	96
Chapter 15	Let's Talk about Leadership	99
	Leadership as a Work-Extraction Mechanism	99
	Leadership as a Service	100
	Leadership and Innovation	101
	Leadership: The Talk and the Do	102

Chapter 16	Hiring a Juggler	103
	The Portfolio	104
	Aptitude Tests (Erghhhh)	105
	Holding an Audition	105
Chapter 17	Playing Well with Others	109
	First, the Benefits	109
	Food Magic	110
	Yes, But . . .	110
Chapter 18	Childhood's End	113
	Technology—and Its Opposite	113
	Continuous Partial Attention	114
	Articulate the Contract	114
	Yesterday's Killer App	115
Chapter 19	Happy to Be Here	117
	Turnover: The Obvious Costs	117
	The Hidden Costs of Turnover	118
	Why People Leave	120
	A Special Pathology: The Company Move	120
	The Mentality of Permanence	122
Chapter 20	Human Capital	125
	How About People?	126
	So Who Cares?	127
	Assessing the Investment in Human Capital	127
	What Is the Ramp-Up Time for an Experienced Worker?	129
	Playing Up to Wall Street	130
Part IV	Growing Productive Teams	131
Chapter 21	The Whole Is Greater Than the Sum of the Parts	133
	Concept of the Jelled Team	133
	Management by Hysterical Optimism	134
	The Guns of Navarone	135
	Signs of a Jelled Team	136
	Teams and Cliques	137
Chapter 22	The Black Team	139
	The Stuff of Which Legends Are Made	139
	Pitiful Earthlings, What Can Save You Now?	140
	Footnote	141

Chapter 23	Teamicide	143
	Defensive Management	144
	Bureaucracy	146
	Physical Separation	146
	Fragmentation of Time	147
	The Quality-Reduced Product	147
	Phony Deadlines	148
	Clique Control	149
	Once More Over the Same Depressing Ground	149
Chapter 24	Teamicide Revisited	151
	Those Damn Posters and Plaques	151
	Overtime: An Unanticipated Side Effect	152
Chapter 25	Competition	155
	Consider an Analogy	155
	Does It Matter? The Importance of Coaching	156
	Teamicide Re-revisited	157
	Mixing Metaphors	158
Chapter 26	A Spaghetti Dinner	159
	Team Effects Beginning to Happen	159
	What's Been Going On Here?	160
Chapter 27	Open Kimono	161
	Calling In Well	161
	The Getaway Ploy	163
	There Are Rules and We Do Break Them	164
	Chickens with Lips	165
	Who's in Charge Here?	165
Chapter 28	Chemistry for Team Formation	167
	The Cult of Quality	168
	I Told Her I Loved Her When I Married Her	169
	The Elite Team	169
	On Not Breaking Up the Yankees	171
	A Network Model of Team Behavior	171
	Selections from a Chinese Menu	172
	Putting It All Together	172

Part V	Fertile Soil	173
Chapter 29	The Self-Healing System	175
	Deterministic and Nondeterministic Systems	175
	The Covert Meaning of Methodology	176
	Methodology Madness	177
	The Issue of Malicious Compliance	179
	The Baby and the Bathwater	179
	The High-Tech Illusion Revisited	180
Chapter 30	Dancing with Risk	183
	Not Running Away from Risk	183
	The One Risk We Almost Never Manage	184
	Why Nonperformance Risks Often Don't Get Managed	185
Chapter 31	Meetings, Monologues, and Conversations	187
	Neuro-sclerosis	187
	The "Technologically Enhanced" Meeting	188
	Stand-Up Meetings	188
	Basic Meeting Hygiene	189
	Ceremonies	189
	Too Many People	190
	Open-Space Networking	190
	Prescription for Curing a Meeting-Addicted Organization	191
Chapter 32	The Ultimate Management Sin Is . . .	193
	For Instance	193
	Status Meetings Are About Status	194
	Early Overstaffing	194
	Fragmentation Again	196
	Respecting Your Investment	197
Chapter 33	E(vil) Mail	199
	In Days of Yore	199
	Corporate Spam	200
	What Does "FYI" Even Mean?	200
	Is This an Open Organization or a Commune?	201
	Repeal Passive Consent	201
	Building a Spam-less Self-Coordinating Organization	202

Chapter 34	Making Change Possible	203
	And Now, a Few Words from Another Famous Consultant	203
	That's a Swell Idea, Boss. I'll Get Right on It.	205
	A Better Model of Change	206
	Safety First	208
Chapter 35	Organizational Learning	211
	Experience and Learning	211
	A Redesign Example	212
	The Key Question About Organizational Learning	213
	The Management Team	214
	Danger in the White Space	215
Chapter 36	The Making of Community	217
	Digression on Corporate Politics	218
	Why It Matters	219
	Pulling Off the Magic	220
Part VI	It's Supposed to Be Fun to Work Here	221
Chapter 37	Chaos and Order	223
	Progress Is Our Most Important Problem	223
	Pilot Projects	224
	War Games	226
	Brainstorming	228
	Training, Trips, Conferences, Celebrations, and Retreats	228
Chapter 38	Free Electrons	231
	The Cottage-Industry Phenomenon	231
	Fellows, Gurus, and Intrapreneurs	232
	No Parental Guidance	233
Chapter 39	Holgar Dansk	235
	But Why Me?	235
	The Sleeping Giant	236
	Waking Up Holgar	237
	<i>Index</i>	239

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Preface

What we have come to think of as the Peopleware project began for us during the course of a long night flight over the Pacific more than thirty years ago. We were flying together from L.A. to Sydney to teach our Software Engineering Lectures series. Unable to sleep, we gabbed through the night about the deep complexities we were encountering in systems projects of our own and the ones related to us by our clients. One of us—neither one can remember which it was—reflected back over what we’d been discussing and offered this summing up: “Maybe . . . the major problems of systems work are not so much technological as sociological.”

It took a while for that to sink in because it was so contrary to what had been our thinking before. We, along with nearly everyone else involved in the high-tech endeavors, were convinced that technology was all, that whatever your problems were, there had to be a better technology solution to them. But if what you were up against was inherently *sociological*, better technology seemed unlikely to be much help. If a group of people who had to work together didn’t trust each other, for example, no nifty software package or gizmo was going to make a difference.

Once the idea was out in the open, we began to think up examples, and it soon became clear to both of us that the social complexities on most of the projects we’d known simply dwarfed any real technological challenges that the projects had had to deal with. And then, inevitably, we needed to face up to something far more upsetting: While we had probably known in our bones for a long time that sociology mattered more than technology, *neither of us had ever managed that way*. Yes, we had done things from time to time that helped teams work better together or that relaxed group tensions, but those things had never seemed like the essence of our work.

How would we have managed differently if we'd realized earlier that the human side mattered much more than the tech side? We started making lists. We had blank acetates and foil pens handy, and so we put some of the lists onto overhead slides and thought giddily of actually presenting some of these ideas to our Sydney audience. What the hell! Sydney was half a globe away from the States and Europe; if we bombed in Australia, who would ever know of it back home?

Our Sydney audience the next week was immediately engaged by the peopleware material, and a bit chagrined (evidently we weren't the only ones who had been managing as if only the technology really mattered). Best of all, people chimed in with lots of examples of their own, which we cheerfully appropriated.

What separated that early out-of-town tryout from the first edition of the book in 1987 was a ton of work conducting surveys and performing empirical studies to confirm what had been only suspicions about the effects of the environment (Part II of this third edition) and to validate some of our more radical suggestions about team dynamics and communication (most of the rest of the book).

Peopleware in its first two editions made us a kind of clearinghouse for ideas about the human side of technology projects, and so our thinking has had to expand to keep up. New sections in this third edition treat some pathologies of leadership that hadn't been judged pathological before, an evolving culture of meetings, hybrid teams made up of people from seemingly incompatible generations, and a growing awareness that, even now, some of our most common tools are more like anchors than propellers.

For this third edition, we are indebted to Wendy Eakin of Dorset House and Peter Gordon of Addison-Wesley for editing and shaping our manuscript. Thanks, too, to our long-time colleagues at The Atlantic Systems Guild—Peter Hruschka, Steve McMenamin, and James and Suzanne Robertson—for thirty years of ideas, brainstorming, debates, meals, and friendship.

—Tom DeMarco
Camden, Maine

—Tim Lister
New York, New York

February 2013

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Tom DeMarco and Timothy Lister are principals of The Atlantic Systems Guild (www.systemsguild.com), a consulting firm specializing in the complex processes of system building, with particular emphasis on the human dimension. Together, they have lectured, written, and consulted internationally since 1979 on management, estimating, productivity, and corporate culture.



Photo of Tom DeMarco
by Hans-Rudolf Schulz

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Photo of Timothy Lister
by James Robertson

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15

Let's Talk about Leadership

Leadership on the job is rare, but talk about it is ubiquitous. Companies talk about it all the time.

The talk is usually about the adroit exercise of organizational power to accomplish a given end. It's managers who lead. Managers are sent off to leadership training to enable them to better use their authority to direct those who work for them. In this view, leadership is something that happens *down* the hierarchy—leaders at the top, followers at the bottom. You are led by the person who is above you on the org. chart and you lead those whose boxes on the chart lie under yours with lines directly down from your box.

Leadership as a Work-Extraction Mechanism

One of those dreadful “motivational” posters tells us, “The speed of the leader sets the rate of the pack.” This kind of leadership is a work-extraction mechanism. Its purpose is to enhance not the *quality* of the experience but the *quantity*. The reason you are being led is to get you to work harder, stay longer, and stop goofing off.

During the early part of the First World War, a young Russian journalist named Lev Davidovich Bronstein wrote home from the front with some observations about leadership. His letters might have been lost, but since he later became the revolutionary Trotsky, they are preserved. In one letter he observes that unless they are given side arms, the junior officers will be completely unable to lead their men into battle. Using a gun to lead means you have to “lead” from behind. This is what work-extraction leadership is all about. The gun, in the workplace, is replaced with delegated authority and positional power.

Leadership as a Service

But the best leadership—the kind that people can mention only with evident emotion and deep respect—is most often exercised by people without positional power. It happens outside the official hierarchy of delegated authority.

When I'm on my home turf, I play tennis two or three times a week in groups organized by a charming fellow named Mike. Mike is our leader. It's Mike who decides the matchups: who plays with whom and against whom. He's the one who shuffles the players (16 of us on four courts) after each set so we all have different partners for all three sets. He invariably makes good pairings so that near the end of a half hour you can look across the courts and see four scores like 5 to 4, 6 to 6, 7 to 6, and 5 to 5. He has a great booming voice, easy to hear even when he is three courts away. He sets the meeting times, negotiates the schedules for court time, and makes sure there are subs for anyone who needs to be away. Nobody gave Mike the job of leading the group; he just stepped up and took it. His leadership is uncontested; the rest of us are just in awe of our good fortune that he leads us as he does. He gets nothing for it except our gratitude and esteem.

—TDM

In this example, leadership is not about extracting anything from us; it's about service. The leadership that the Mikes of the world provide enables their endeavors to go forth. While they sometimes set explicit directions, their main role is that of a catalyst, not a director. They make it possible for the magic to happen.

In order to lead without positional authority—without anyone ever appointing you leader—you have to do what Mike does:

- Step up to the task.
- Be evidently fit for the task.
- Prepare for the task by doing the required homework ahead of time.
- Maximize value to everyone.
- Do it all with humor and obvious goodwill.

It also helps to have charisma.

Leadership and Innovation

The propensity to lead without being given the authority to do so is what, in organizations, distinguishes people that can innovate and break free of the constraints that limit their competitors. Innovation is all about leadership, and leadership is all about innovation. The rarity of the one is a direct result of the rarity of the other.

Innovation is a subject whose talk:do ratio is even more out of whack than that of leadership. Upper management in most companies talks a good game on innovation. The party line goes something like this: “We need innovation to survive. It is so important. Its importance simply cannot be overstated. No sir. Innovation is reeealy, reeealy important. And innovation is everybody’s job. In fact, it is probably the most important part of everybody’s job. Listen up, everybody: Get out there and innovate.” Oh, and by the way,

- Nobody is given any time to innovate, since everyone is 100-percent busy.
- Most innovation that happens anyway is distinctly unwelcome because it requires accommodating change.
- Real innovation is likely to spread beyond the realm of the innovator, and so he or she may be suspected of managing the organization from below, a tendency that upper management tends to view with great suspicion.

The net here is that it takes a bit of a rebel to help even the best innovation achieve its promise: rebel leadership. The innovator himself doesn’t have to be a great leader, but someone has to be. What rebel leadership supplies to this process is the time to innovate—you take a key person away from doing billable work (this may constitute constructive disobedience on your part) in order to pursue a nascent vision—and the hard push for whatever reshaping the organization has to submit to in order to take advantage of the innovation.

Since nobody ever knows how the next innovation may alter the organization, nobody knows enough to give permission to the key instigators to do what needs to be done. That’s why leadership as a service almost always operates without official permission.

Leadership: The Talk and the Do

At a recent Broadway performance of Arthur Miller's *Death of a Salesman*, I was struck by a line that comes near the end of the final act. The protagonist, Willy Loman, approaches his well-to-do neighbor, Charley, to ask for yet another small loan. The sad contrast between Charley's fortunes and Willy's own failure is reflected in their sons: Willy's son Biff has gone badly downhill, while Charley's son, Bernard, has become a successful lawyer. Charley makes the loan and tells Willy proudly that Bernard is off to Washington, D.C., to argue a case before the Supreme Court. Imagine that, the United States Supreme Court.

"The Supreme Court!" Willy says. "And he didn't even mention it!"

"He don't have to—" Charley replies, "he's gonna do it."

—TRL

If companies were more inclined to let leadership arise naturally, they wouldn't need to produce so much hot air talking about it.

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Index

A

Accounts receivable projects, 3
Ad hoc meetings, 194
Ad hoc space, 89
Aesthetics in Philosophy, 218
Agendas for meetings, 189
Alexander, Christopher, 80–88
Alignment of goals, 135–136
Anti-popcorn standard, 96
Anticipated humiliation from change, 208–209
Appearance
 in hiring, 94
 office emphasis on, 75
 standards, 95, 171
Aptitude tests, 105
Aristotle, 218
Articulating work expectations, 114–115
Assertion
 for environment change, 74
 proof by, 50–51
AT&T Bell Laboratories move, 121–122
Atlantic Systems Guild, 87
Attendance at meetings, 190
Attention, continuous partial, 114
Auditions, 105–107, 165
Australia, work to rule strategy in, 179
Authority in teams, 165–166
Automation, false hope from, 34
Average defect density of software, 21

Awards as team obstacle, 157
Awareness as office environment
 issue, 74

B

Backlog myths, 33
Baggage handling system, 184–185
Barnes & Noble Nook reader, 183–184
Basic instincts, 19
“Believers But Questioners” in change, 205
Bell Laboratories
 organizational move, 121–122
 thinking on the job at, 65–66
Best companies, turnover in, 122
Black Team, 139–141
“Blindly Loyal” employees in change, 205
Boehm, Barry, 109
Bonham, Bill, 233
Brady, Sheila, 110
Brain time vs. body time, 61–66
Brainstorming
 guidelines, 228
 provisions for, 10–11
Branton, Richard, 233
Breaking up jelled teams, 171
Bridges, William, 206
Bronstein, Lev Davidovich, 99
Brown University, 55
Brunner, John, 50
Bureau of Labor Statistics, 123

- Bureaucracies
 - Parkinson's Law in, 25–26
 - as team obstacle, 146
- Busy work, 29
- C**
- Calling in well, 161–163
- Capital, employees as, 125–130
- Catalysts
 - importance of, 10–11
 - leadership as, 100
 - Satir Change Model, 207
- Celebrations, 228–229
- Centralized thinking, 177
- Ceremonies, 189–190
- Challenges
 - deadlines as, 148
 - desired outcome as, 185–186
 - importance of, 131
- Change
 - model for, 206–208
 - resistance to, 203–206
 - security in, 208–209
- Chaos
 - in change model, 207–208
 - order from, 223–224
- Chemistry in jelled teams, 167–172
- Childhood's End* (Clarke), 113
- Clarke, Arthur C., 113
- Cliques in jelled teams
 - managerial insecurity from, 137
 - team breakup from, 149
- Closure, 169
- Coaching, 156–157
- Coding War Games, 43–48
 - dedicated floor space factor, 52
 - formula for, 226–227
 - interruptions, 62–63
- Communal eating, 88
- Communication demonstrations in hiring
 - process, 105–107
- Communist Party, 233
- Community
 - building process, 220
 - corporate politics, 218–219
 - importance, 219–220
 - need for, 217–218
- Community gardens for employees, 123
- Company moves, turnover from, 120–122
- Competitions
 - Coding War Games, 43–48
 - jelled teams, 155–158
- Competitive windbagging at meetings, 187
- Complexity, meetings for, 187
- Compliance, malicious, 179
- Conferences
 - benefits, 228–229
 - Open-Space, 191
- Consent for e-mail, 201–202
- Consistency, functional, 225
- Constantine, Larry, 165
- “Constructive reintroduction of small amounts of disorder” policy, 224
- Consultants, hiring, 106
- Continuous partial attention, 114
- Contracts, articulating, 114–115
- Convergence of method, 179–180
- Conversations in lieu of meetings, 189–190
- Coordination
 - mutual, 200
 - self-coordination, 202
- Cornell University, music tests at, 75–76
- Corporate culture, 173
 - change, 203–209
 - community building, 217–220
 - e-mail, 199–202
 - flow factor, 65
 - meetings, 187–191
 - organizational learning, 211–215
 - politics, 218–219
 - risk management, 183–186
 - self-healing systems, 175–181
 - time wasting, 193–197
- Corporate entropy, 96–97
- Corporate goals vs. team goals, 134–136
- Corporate mold, breaking, 77
- Corporate spam, 200
- Corrective actions, 235–237
- Costs
 - office space savings, 49–55
 - on profit and loss statements, 125–130
 - quality, 21–23
 - turnover, 17, 117–119

Cottage-industry phenomenon, 231–232
 Covert meaning of Methodology,
 176–177
 Creative space, 75–76
 Crosby, Philip, 22
 Cult of quality, 168–169
 Cultural diversity of food in team
 building, 110
 Culture, corporate. *See* Corporate culture

D

Danish legislature, 86
 Dansk, Holgar, 235–237
 Data General project, 17
 Day-care center, 220
 de' Medici, Lorenzo, 204
 Deadlines
 moving, 17
 as team obstacle, 148
 unreachable, 20
Death of a Salesman, 102
 deBono, Edward, 144
 Dedicated floor space and people density,
 53–54
 Defect-prone design, 8
 Defects
 defect density of software, 21
 noise factor in, 53
 Defensiveness
 from error management, 8
 as team obstacle, 144–145
 DeMarco, Tom, 183
 Deming, W. Edwards, 157
 Denver International Airport Baggage
 Handling System, 184–185
 Deterministic systems, 175–176
 Digital Equipment Corporation, PDP11
 development at, 164
 Direct physical oversight, 163
 Dirksen, Everett, 121
 Disposability feelings, turnover from, 120
 Disruptions and disturbances
 flow factor, 62–64
 from fragmentation, 197
 getaways for, 164
 telephones, 67–71
 Diversity in teams, 109–111
 Do Not Disturb signs, 65

Documentary consistency, 225
 Documentation in Methodologies, 178
 Doors as success symbol, 73
 Downsizing, 130
 Dress codes, 95–96
 DuPont, standardization at, 180
 Dutch East India Company, 29

E

E-Factor, 64–65
 E-mail
 corporate spam, 200
 FYIs, 200–201
 open organizations, 201
 passive consent, 201–202
 self-coordinating organizations, 202
 vs. telephone calls, 70
 time spent on, 199–200
 and young workers, 115
 E-publications, borrowing, 184
 Eagle project at Data General, 17
 Early overstaffing, meetings from,
 194–196
 Eating, communal, 88
 Efficient production measures, 7
 Efficient telephone schemes, 70–71
 EG&G contractor, retraining at, 123
 El Cordobes, 236
 Eliteness in jelled teams, 136–137, 169–171
 Emotions, 19
 Employees
 as costs vs. capital, 125–130
 hiring. *See* Hiring
 parts view of, 9–10
 turnover. *See* Turnover
 English Theory, 14
 Enjoyment in jelled teams, 137
 Entropy, corporate, 96–97
 Environment. *See* Office environment
 Environmental Factor, 64–65
 Errors, dealing with, 8
 Ethics in Philosophy, 218
Even Cowgirls Get the Blues (Robbins), 161
 Expectations, articulating, 114–115
 Expense vs. investment, 126
 Experience
 as Coding War Games factor, 45
 learning from, 211–212

Experienced workers, ramp-up time
for, 129
Extended overtime side effects,
152–154

F

Failed projects, 3–5
False challenges, 186
False hopes, 31–34
Family life and workaholics, 16
Fellows, 232–233
First-class flights, 170
Flexibility in office environment, 77
Flight from excellence, 20–22
Floor plans, 38–40
Flow state
description, 61–62
E-Factor, 64–65
fragmentation issues, 197
no-flow states, 62–63
partial attention in, 114
time accounting based on, 63–64
Food
communal eating, 88
for team building, 110
Foreign element in Satir Change
Model, 207
Forester, C. S., 93
“Fourteen Points”, 157
Fragmentation of time
as team obstacle, 147
time wasting from, 196–197
Free electrons, 232–233
Frustrations from flow interruptions, 62
Fujitsu
nonstandardization at, 181
team veto power, 23
Fun on the job, 221
brainstorming, 228
Coding War Games, 226–227
corrective actions, 235–237
cottage-industry phenomenon,
231–232
fellows, gurus, and intrapreneurs,
232–233
life counseling, 233–234
order from chaos, 223–224

pilot projects, 224–225
training, trips, conferences,
celebrations, and retreats, 228–229
Functional consistency, 225
Furniture police, 37–40
FYIs
e-mail, 200–201
meeting, 189–190

G

Generational divide, 113–115
Getaway ploys, 163–164
Gilb, Tom, 58
Gilb’s Law, 58
Glitz, 74–75
Goals, team vs. corporate, 133–136
“Good enough” products, 168
Group interaction space, 88
Gurus, 232–233

H

Hawthorne Effect
nonstandard approaches for, 181
in pilot projects, 224
Hawthorne Western Electric Company, 181
Heterogeneity in jelled teams, 172
Hewlett-Packard
community building at, 123
quality standards, 22–23
Hidden costs of turnover, 118–119
Hiding out, 54–55
High-Tech Illusion
description, 5
self-healing systems, 180–181
Hiring
aptitude tests, 105
auditions, 105–107, 165
diversity in, 109–111
introduction, 103–104
portfolios, 104–105
uniformity in, 94–95
Hitachi Software
retraining at, 123
team veto power, 23
Homogeneous work groups, 172
Hornblower factor, 93–97

Hotels, 85
 Human capital as expense, 125–127
 Humiliation from change, 208–209
 Hysterical optimism, management by,
 134–136

I

IBM, Santa Teresa facility, 51–52
 Ideal workplace, 79–80
 indoor and outdoor space, 87
 organic order, 80–82
 patterns, 82–84
 public space, 87–88
 tailored work space, 84–85
 windows, 84–86
 Identity in jelled teams, 136–137, 169–171
 Immersion period for flow, 62–63
 Improvement from change, 206
 Incompatible multitasking, 71
 Inconsistent products, 225
 Individual differences in Coding War
 Games, 44–45
 Individuality of employees, 10
 Indoor and outdoor space pattern, 87
 Industrial Revolution, 14
 Innovation, leadership for, 101
 Insecurity of management, 96
 Inspirational posters, 151–152
 Insubordination in skunkworks
 projects, 164
 Interchangeable view of employees,
 9–10
 Internal competition in teams, 155–158
 Interrupt-consciousness, 64
 Interruptions
 flow factor, 62–64
 from fragmentation, 197
 getaways for, 164
 telephones, 67–71
 Intimacy gradient, 87
 Intrapreneurs, 232–233
 Inversion thinking, 144
 Investment
 vs. expense, 126
 in human capital, 127–130
 time wasting issues, 197
 Iterative design, 8

J

Japanese companies
 quantity and productivity, 21–22
 team veto power, 23
 Jeffery, Ross, 27
 Jelled teams
 Black Team, 139–141
 breaking up, 171
 chemistry, 167–172
 vs. cliques, 137
 competition, 155–158
 concept, 133–134
 cult of quality, 168–169
 eliteness, 136–137, 169–171
 getaways, 163–164
 goals, 134–136
 natural authority in, 165–166
 network model of behavior, 171–172
 obstacles, 143–152
 reassurance in, 169
 rule breaking, 164
 signs, 136–137
 team building, 159–160
 voice in team member selection, 165
 Joel, Billy, 14
 Johnson, Jerry, 205
 Johnson, Lyndon, 121
 Joint ownership of product by teams, 137
 Jones, Capers
 on scheduling, 28
 on systems development costs, 146
 Jugglers, hiring, 103–104
 Just-passing-through mentality, 120

K

Kay, Alan, 113
 Kennedy, John, 121
 Ketchledge, Ray, 122
 Kronborg castle, 236

L

Laetrile, 31
 Languages
 changes, false hope from, 33
 as Coding War Games factor, 45

- Laptops at meetings, 188
Lateral Thinking (deBono), 144
 Lawrence, Michael, 27
 Leadership, 99
 for innovation, 101
 jelled teams, 171–172
 as service, 100
 talk:do ratio, 101–102
 as work-extraction mechanism, 99
 Learning, organizational. *See*
 Organizational learning
 Library borrowing of e-publications, 184
 Life counseling, 233–234
 Lister, Timothy, 183
 Logic in Philosophy, 218
 Loman, Willy (character), 102
 Long-term perspective for turnover, 119
 Loss of key people, productivity losses
 from, 17
 Low turnover in jelled teams, 136
 Loyalty
 free electrons, 233
 and turnover, 120
- M**
- Machiavelli, Niccolò, 204
 Maginot Line, 211
 “Make a cheeseburger, sell a
 cheeseburger” mentality, 7–11
 Malicious compliance, 179
 Management
 corporate entropy, 96–97
 definitions, 8–9
 dress codes, 95–96
 Hornblower factor, 93–97
 by hysterical optimism, 134–136
 leadership, 99–102
 Management by Objectives (MBO), 157
 Management Team, learning from, 214–215
Managing Transitions (Bridges), 206
 Mao Tse-tung, 181
 Matsubara, T., 22
 Mazzucchelli, Lou, 168
 MBO (Management by Objectives), 157
 McCue, Gerald, 51–52, 61
 McMenamain, Steve, 203, 232
 Mean Time Between Failures, 20–21
 Measurement
 flow time, 63–66
 productivity, 57–60
 Meetings
 attendance limitations, 190
 ceremonies, 189–190
 cures for, 191
 early overstaffing, 194–196
 hygiene, 189
 neuro-sclerosis from, 187
 open-space networking, 190–191
 for reassurance, 194
 stand-up, 188
 status, 194
 technologically enhanced, 188
 Mentality of permanence, 122–123
 Merit reviews as team obstacle, 157
 Meta-plans, 81
 Metaphysics in Philosophy, 218
 Methodologies
 convergence of method, 179–180
 high-tech illusion, 180–181
 Methodology systems
 covert meaning, 176–177
 malicious compliance, 179
 problems with, 177–179
 Middle management, learning from,
 214–215
 “Militantly Opposed” employees in
 change, 205
 Miller, Arthur, 102
 Mills, Harlan, 46
 Mistrust as team obstacle, 144–145
 Mitigation planning, 185
 Modular cubicles, 84
 Modular methods, 1
 Morgan Motorcars Limited, 69
 Motivation
 Methodologies, 179
 scheduling effects on, 28
 Motivational accessories, 99, 152
 Moves, turnover from, 120–122
 Multiple assignments, time wasting
 from, 197
 Multitasking, incompatible, 71
 Mushet, Michael L., 233
 Music in workplace, 75–76
 Mutual coordination, 200

N

Names of teams, 136
 Natural authority in teams, 165–166
 Natural light, 39
 Natural order, 81
 Need-to-know test for e-mail, 200, 202
 Negroponite, Nicholas, 213
 network model of team behavior,
 171–172
 Networking, open-space, 190–191
 Neuro-sclerosis, 187
 New employee costs, 117–119
 New South Wales, 27–29
 New Status Quo phase in Satir Change
 Model, 208
 Newton's Law vs. Parkinson's Law, 25–26
 No-flow states, 62–63
 Noise, 37
 in creative space, 75–76
 density factor, 54
 flow factor, 61
 quality effects, 52–53
 Non-replicable pattern formulas, 88
 Nondeterministic systems, 175–176
 Nonperformance risks, 185–186
 Nook reader, 183–184
Notes on the Synthesis of Form
 (Alexander), 80
 Number of defects as Coding War Games
 factor, 45

O

Odysseus, 32
 Office environment, 35
 corporate mold, 77
 creative space, 75–76
 doors, 73
 flow, 61–66
 furniture, 37–40
 glitz, 74–75
 hiding out from, 54–55
 ideal workplace, 79–89
 indoor and outdoor space, 87
 organic order, 80–82
 patterns, 82–84
 and productivity, 41–48, 57–60

 public space, 87–88
 quality effects, 52–53
 space savings, 49–55
 speaking out about, 73–74, 88–89
 tailored work space, 84–85
 vs. technology, 113–114
 telephones, 67–71
 vital space, 76–77
 windows, 84–86
 Open Kimono attitude, 162–164
 Open organizations
 e-mail, 201
 fantasy of, 190
 “Open-Plan DP Environment Boosts
 Employee Productivity” article,
 50–51
 Open-plan seating, 50–51
 Open-space networking, 190–191
 Order
 from chaos, 223–224
 organic, 80–82
Oregon Experiment (Alexander), 81ff.
 Organic order, 80–82
 Organizational learning, 211
 and experience, 211–212
 location, 213–214
 Management Team, 214–215
 redesign example, 212–213
 white space, 215
 Orr, Ken, 179
Out of the Crisis (Deming), 157
 Outside forces in Satir Change
 Model, 207
 Outward Bound schools, 229
 Over-coordination, 200
 Oversight, physical, 163
 Overstaffing at meetings, 194–196
 Overtime
 disturbances as cause of, 41–42
 myths, 15–16
 side effects, 152–154
 unpaid, 14–16

P

Pacific Bell, retraining at, 123
 Paging systems, 40, 73
 Pair mates as performance factor, 46

- Paperwork
 - Methodologies, 178
 - as team obstacle, 146
- Parkinson, C. Northcote, 25
- Parkinson's Law, 25–29
- Partial attention, 114
- Parts, view of employees as, 9–10
- Passion, 19
- Passive consent for e-mail, 201–202
- Past work demonstrations in hiring process, 105–107
- Pathologies, team, 161
- Pattern Language* (Alexander), 82–88
- Patterns, 82–84
 - indoor and outdoor space, 87
 - of patterns, 88
 - public space, 87–88
 - tailored work space, 84–85
 - windows, 84–86
- PDP11 development, 164
- Peer-coaching, 156–157
- Peer pressure as flow factor, 65
- Peer review for convergence of method, 180
- Peers, team members as, 171
- People and Project Management* (Thomsett), 161
- People management overview, 1
 - brainstorming provisions, 10–11
 - definitions, 8–9
 - error handling, 8
 - failed projects, 3–5
 - false hopes, 31–34
 - interchangeable view of employees, 9–10
 - overtime, 15–16
 - Parkinson's Law, 25–29
 - productivity and turnover, 16–18
 - project development, 7–8
 - quality, 19–23
 - Spanish Theory, 13–14
 - workaholics, 15–16
- People Store attitude, 9–10
- Performance problems, 26
- Permanence mentality, 122–123
- Philosophy, 218
- Phony deadlines as team obstacle, 148
- Physical oversight, 163
- Physical separation as team obstacle, 146–147
- Pilot projects, 224–225
- Pink noise, 75–76
- Planning and design, meetings for, 194
- Plaques, 151–152
- Plastic person in hiring, 94–95
- Police mentality in office environment, 38
- Politics
 - corporate, 218–219
 - project failures from, 4
 - window allocations, 84–85
- Popcorn, 96
- Portfolios, 104–105
- Posters, 99, 151–152
- Practice-and-Integration phase in Satir Change Model, 208
- Preschool center, 220
- Prescriptive methodologies as team obstacle, 145
- Presentations in hiring process, 105–107, 165
- The Prince* (Machiavelli), 204
- Priorities in people orientation, 4–5
- Prisons, office design for, 40
- Productivity
 - Coding War Games, 43–48
 - company differentials, 46–47
 - false hopes, 31–34
 - Hawthorne Effect, 181
 - office environment, 41–48, 57–60
 - office space savings, 49–55
 - overtime effects, 152–154
 - Parkinson's Law myths, 25–29
 - and pressure, 28
 - and quality, 21–22
 - Spanish Theory management, 14
 - turnover effects, 16–18, 128–129
- Professional standards, 96
- “Professional” term, 96
- Profit and loss statements, employee costs on, 125–130
- Project development, 7–11
- Project Tournament in Coding War Games, 226–227
- Promotions and turnover, 119
- Proof by assertion, 50–51
- Psychological theory, 19
- Public address systems, 40
- Public space pattern, 87–88

Q

- Quality, 19
 - costs, 21–23
 - in jelled teams, 168–169
 - office environment effects, 52–53
 - overtime for, 41
 - vs. quantity, 99
 - sacrificing, 20–22
- Quality–If Time Permits policy, 22
- Quality Is Free* (Crosby), 22
- Quality-reduced products as team
 - obstacle, 147–148
- Quotas for errors, 8

R

- Ramp-up time for experienced
 - workers, 129
- Reader's Digest, community building
 - at, 123
- Reassurance
 - for jelled teams, 169
 - meetings for, 194
- Rebel leadership, 101
- Redesign example, 212–213
- Repeated assertion for environment
 - change, 74
- Resistance to change, 203–206
- Resistance-to-Change Continuum, 205
- Responsibility in Methodologies, 178
- Retraining and turnover, 123
- Retreats, 228–229
- Right-brain function music factor, 76
- Risk, 183
 - dealing with, 183–184
 - nonperformance, 185–186
 - team failure, 184–185
- Robbins, T., 161
- Royalty system in e-publication
 - borrowing, 184
- Rule breaking in teams, 164

S

- Sacrificing quality, 20–22
- Salaries
 - as Coding War Games factor, 46
 - as expense, 126–127

- Salary reviews as team obstacle, 157
- Santa Teresa facility, 51–52
- Satir, Virginia, 206–207
- Satir Change Model, 206–208
- Schools, company-provided, 220
- “Seat of the skirt management”, 110
- Second thermodynamic law of
 - management, 97
- Security and change, 208–209
- Self-assessment, 59–60
- Self-coordination, 200, 202
- Self-esteem
 - as basic instinct, 19
 - and quality, 20, 148
- Self-healing systems, 175
 - convergence of method, 179–180
 - deterministic and nondeterministic, 175–176
 - High-Tech Illusion, 180–181
 - malicious compliance, 179
 - Methodology systems, 176–179
- Sense of humor in teams, 165
- Sense of identity and eliteness in teams, 136–137
- Separation as team obstacle, 146–147
- Service, leadership as, 100
- Seven Sirens of false hope, 32–34
- Sheep Look Up* (Brunner), 50
- Short-term perspective of turnover, 118–119
- Sibling competition, 155–156
- Sick organizations, 162
- Skunkworks projects, 164
- Socialization process in hiring, 106
- Sociology, project failures from, 4–5
- Software Engineering Economics* (Boehm), 109
- Southern California Edison, 123
- Soviet society, 233
- Space. *See* Office environment
- Spaghetti dinner team building example, 159–160
- Spam, corporate, 200
- Spanish Theory management, 13–18
- Speaking out about office environment, 73–74, 88–89
- Sports team metaphor, 158
- Staffing plans, 194
- Stages in Satir Change Model, 207–208

Stand-up meetings, 188
 Standard dress, 95–96
 Standardization
 for convergence of method, 180
 limitations, 180–181
 Standards, professional, 96
 Start-up costs of new employees, 118,
 128–129
 Status meetings, 194
 Status-seeking as office environment
 issue, 75
 Steady-state production thinking, 10–11
 Stone, Linda, 114
 Strikes in Australia, 179
 Surveys
 Parkinson's Law, 27–29
 project failures, 3–4
 Swarthmore College, 86

T

Tailored work space pattern, 84–85
 Tajima, D., 22
 Talk:do ratio, 101–102
 Task-accounting data, 63–64
 Team sociology, project failures
 from, 4–5
 Teams
 diversity in, 109–111
 jelled. *See* Jelled teams
 overview, 131
 Technical laetrile, 31
 Technologically enhanced meetings, 188
 Technology
 vs. environment, 113–114
 focus on, 5
 High-Tech Illusion, 5, 180–181
 Telephone support tasks, 197
 Telephones, 67
 alternate scenario, 67–68
 etiquette, 69–70
 incompatible multitasking, 71
 modified ethic, 70–71
 Testers on Black Team, 139–141
 Tests, aptitude, 105
 Thomis, Wendl, 65
 Thomsett, Rob, 161
 Time accounting based on flow, 63–64

Time fragmentation
 as team obstacle, 147
 time wasting from, 196–197
 Time pressure, quality loss from, 21
 Time wasting
 e-mail. *See* E-mail
 example, 193–194
 fragmentation, 147, 196–197
 investments considerations, 197
 meetings, 194–196
Timeless Way of Building (Alexander),
 79–84
 Timmerman, Doug, 158
 Tools for convergence of method, 180
 Totalitarian order, 81
 Toumenoska, Lee, 114
 Townsend, Robert, 121
 Training
 benefits, 228–229
 for convergence of method, 180
 as investment, 127
 and turnover, 120
 Tricks, false hope from, 32
 Trips, 228–229
 Trotsky, Leon, 99
 Trust for teams, 144–145
 Turnover
 community building for, 219
 from company moves, 120–122
 costs, 117–119
 in jelled teams, 136
 mentality of permanence, 122–123
 and organizational learning, 212
 productivity effects, 16–18, 128–129
 reasons, 120
 Two-person offices, 76–77

U

Undertime, 15
 Uniform plastic person in hiring, 94–95
 Uniformity, dress codes for, 95–96
 Uniqueness of employees
 jelled teams, 170–171
 as management annoyance, 10
 University of Cambridge, 81
 University of New South Wales, 27–29
 Unpaid overtime, 14–16

“Unprofessional” term, 96
 Unreachable deadlines, 20
Up the Organization (Townsend), 121

V

Veto power by teams, 23
 Vital space, 76–77
 Voice in team selection, 165
 Voice-mail, 70

W

Wall Street influences, 130
*Waltzing With Bears: Managing Risk on
 Software Projects* (DeMarco and
 Lister), 183
 Weinberg, Jerry, 154
 Weinberg, Sharon, 34
 Wiener, Jerry, 162
 Windows, 38–40, 84–86

Women

company move effects on, 121
 team benefits from, 109–110
 Work modes, 61–62
 Work to rule strategy, 179
 Workaholics, 15–16
 Working meetings, 189
 Workplace. *See* Ideal workplace; Office
 environment
 Workspace Enclosure pattern, 82–83

X

Xerox
 first-class flights, 170
 loose charter, 233

Y

Years of experience as Coding War
 Games factor, 45