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ESSENTIAL SKILLS FOR SOFTWARE ARCHITECTS

Dave Hendricksen

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DAVE HENDRICKSEN

◆ Addison-Wesley

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To my wife, Jennifer, my son, Tim, and my daughter, Katie.

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CONTENTS

Preface	xvii
Acknowledgments	xxi
About the Author	xxiii
Part I Relationship Skills	1
Chapter 1 Gracious Behavior	3
How Would Others Describe You?	3
The Technical Ceiling	4
The Road to Becoming a Gracious Professional	6
Choosing Relationships over Correctness	6
Learning to Delegate	9
Life Is Reflexive	10
Life or Death for Effective Communications	13
Integrity and Honesty Without Bluntness	15
Don't Bury Issues—They Will Come Back	17
Provide a Professional Service	19
Forgive Past Offenses	20
Summary	23
Bibliography	23
Chapter 2 Communication	25
Communication Principles	26
Listen First, Talk Later	27
Be There	28
Be Positive	29
Apologize Early	29
Avoid the Feeding Frenzy on Imperfections	30
Communication Strategies	31
Prefer Yes over No	31
Establishing Trust in the Sales Process	33
	vii

Reserve Your No's for Special Occasions	33
Avoid the Urge to Get Defensive	36
Hear Suggestions as Collaborative Improvements	36
Learn Others' Communication Needs, Including Your Own	37
Think on Your Feet	40
Communicating with Executives	41
Executives Thrive on Trust, Loyalty, and Consistency	41
Prefer Clarity over Completeness	42
Don't Surprise Executives	43
Summary	45
Bibliography	45
Chapter 3 Negotiation	47
Negotiation Principles	48
No Surprises	48
Don't Waver on Decisions	49
Delegate Authority, Not Accountability	49
Seek Help When You Are in over Your Head	50
Don't Cover Things Up	51
Do the Right Thing Even When It's Hard	51
Negotiation Strategies	52
Listen to Your Gut Feelings	52
Manage to Yes	52
Don't Find the Differences	54
Find the Common Ground	54
If General Agreement is Not Possible, Make Everyone Slightly Unhappy	55
Use Negotiation as a Means of Improvement	56
Negotiation Prep Work	57
Know What Is Negotiable	57
Know How to Surf the Organization	58
Seek a Collaborative Context for Key Decisions	60
Learn the Culture	61
Let Others Understand Your Thinking	62
Negotiation Wrap-Up	62
Ongoing Defense of the Decision	63
Maintaining an Architecture Decision Log	63
Sometimes You Win, Sometimes You Lose	64
Learning from Delegating	65
Summary	66
Bibliography	67

Chapter 4 Leadership	69
Leadership Principles	70
Establish Trust	71
Establish a Common Vision	71
Establish Strategic Partnerships (Bring Safety Through Relationships)	72
Eat Your Own Dog Food (Bring Safety to What You Say)	73
Perceive Risk, Assess Impact, and Act (Bring Clarity to Risk)	74
Deal with Risk Appropriately: What Is a Firecracker Versus an Atomic Bomb? (Bring Clarity to Impact)	75
Leadership Strategies	76
Use Occam's Razor	76
Present Visualizations of Information	76
Lead by Keeping Things Focused	77
Sell Based on Context	78
Following the Crowd (Looking for Opportunities to Leverage)	79
Focus Executives on Vision, Not Conflict Resolution	80
Leadership Timing	80
Capitalize on Organizational Momentum	80
Learn When to Rescue	81
Allow Others to Learn	82
Know When to Stand Alone	82
Ask for Forgiveness or Ask for Permission	84
Leading Others	85
Allow Others to Contribute (Don't Mandate)	85
Engage Others Through Influence	87
Enable Others to Take Ownership	88
Deal with Conflict	89
Summary	89
Bibliography	90
Chapter 5 Politics	93
Politics Defined	93
The Political Marketplace	94
Political Context	98
Align with Strategic Company Directions	98
Understand the Cultural Context That Surrounds You	99
Address Others' Concerns Early	100
Believe in What You Are Selling	102
Not My Problem	103
Relationships (Context with Others) Matter	103

Political Principles	104
Taking the High Road	105
Avoid Compromising Your Values	105
Compete Graciously	106
Operate with Transparency	106
Be Who You Are	106
Help Others and Don't Expect Anything in Return	107
Realize That Life Is Reflexive	107
Political Strategies	108
Help Others Achieve Their Objectives	108
Learn to Enjoy the Journey (Not Just the Destination)	108
Strive for Excellence in the Areas That Matter	109
Be Willing to Compromise on Lower-Priority Goals	109
Don't Take Offense to Poor Behavior	110
Confront Interpersonal Issues Privately	111
Political Timing	111
Execute Things in a Timely Fashion	112
Failure Today Does Not Mean You Will Not Succeed	
Tomorrow	113
Realize That Politically, You Will Not Always Win	113
Get in the Game	114
Becoming a Good Politician	115
Bibliography	116

Part II Personal Skills

117

Chapter 6 Transparency	119
Architects Live in a Glass House	119
Types of Transparency	121
Self-Transparency	121
Be Yourself	121
Acknowledge Your Weaknesses	122
Acknowledge Your Strengths and Interests	124
Beat the Crowd to Your Boss	125
Project Transparency	126
Let Executives See All the Cards	126
Architects Bring Transparency and Clarity to Many Areas	128
Architects Bring Discovery to Acquisition	129
Relational Transparency	133
Give Credit to Others Where Credit Is Due	133

Be Consistent in What You Say	134
Apologizing Demonstrates Transparency	135
Learn to Hear Before You React (Seek Transparency)	135
Allow Others to Be Transparent with You	136
Becoming a Transparent Architect	136
Bibliography	137
Chapter 7 Passion	139
What Is Passion?	140
Discovering Passion	141
How Do I Find Passion?	141
Persistence and Passion: The Ultimate Killer Combination	143
Passion over Position	144
Rekindling Passion	145
Using Passion as a Guide	145
Watch for Opportunity: It Usually Seeks You and Speaks Quietly	146
Follow Your Instincts	147
Choose Areas That You Are Passionate About	148
Change: The Kick in the Pants to Get You Moving Again	149
Lack of Passion Acts as a Ceiling to Your Career	150
Do the Hard Things Well and Give It Everything You Have	151
Passion: The Internal Fuel That Supplies Drive	151
Protecting Your Passion	151
Ignore the Critics: It's Your Passion, Your Vision— Not Theirs	152
Avoid Distractions	152
What Is One Thing You Can Do Today to Pursue Your Passion?	153
Learn to Jump in and Enjoy the Ride	154
Becoming a Passionate Architect	155
Bibliography	156
Chapter 8 Context Switching	157
Self-Awareness Context	160
Be Where You Are	160
Be Aware of Your Weaknesses	161
There's More to Life Than Work	161
The Myth of Multitasking Efficiency	161
Keep the Adrenaline in Check: Sloooow Down	162
Architectural Awareness Context	162
Bring the -Ilities	162

Seek Proper Coupling and Cohesion	162
Constantly Build Your Context	164
Elephant Context	164
What Is Not Being Said?	165
Ask the Hard Questions	165
Deliver the Bad News Early	166
If They Owned the Company, What Would They Do?	166
Decision Awareness Context	167
Do They Already Have the Problem Solved?	167
Do They Know Which Alternatives Are Possible?	167
Have Others Already Weighed in on the Decision?	168
Be a Neutral Third Party, Even When It Is a Disadvantage	169
Conversational Context	169
Avoid Meetings and Email	169
Bring in Others (Now), If Needed	169
Audience Context	169
Know Your Audience	170
Be Appropriate	170
Sometimes Play Good Cop, Bad Cop	170
Supply Background Information	170
Project Context	171
Bring a Budget	171
Bring Pragmatism	172
Learn to Surf the Avalanche	172
Seek Out Dedicated Resources	173
Which Assumptions Are You Making?	173
Becoming a Context-Aware Architect	173
Bibliography	174

Part III Business Skills

175

Chapter 9 Business Knowledge	177
Understanding Business	179
Marketing, Finance (ROI), and Sales	179
Consider Getting a Business Degree	181
Understanding Your Company	183
Know Your Product's Value Proposition	183
Know How Your Company Makes Money	184
Understand Your Company's History/Culture	184

Understanding Your Customers	185
Consider Going on a Customer Visit, Sales Call, or Helping Staff a Booth at a Trade Show	185
Consider Watching Usability Studies, Product Concept Interviews, or Other Customer Product Evaluations	187
Consider Using Agile Techniques	188
Understanding Your Domain	188
Gather Domain Knowledge	188
Understand Your Domain in the Business Context	190
Help the Business Better Understand Technology	190
Becoming a Business-Savvy Architect	191
Bibliography	192
Chapter 10 Innovation	193
Innovation Defined	194
Establishing Margins	195
Finding Margins	195
Innovate at the Edge	197
What Would You Do? (Given No Constraints, Don't Try to Posture)	198
Encourage Others to Think and Be Open	199
Be Prepared for the Naysayers	200
Avoid the Naysayers and Find a Safe Place to Think	200
Developing an Internal Compass	200
Listen to Your Gut	200
Learn to Trust Yourself	201
Listen to the Customer Closely, But Maintain Your Own Vision	201
Listen to Others (Collaborate)	202
Can You Make a Baby Step Today?	202
No Is Okay for Today: Keep Plugging Along, Because Yes Will Come	203
Blending Essential Concepts	204
Read, Read, Read	204
Crazy Ideas Help You Discover the Real Boundaries	205
Have a Big Vision	205
<i>Innovator's Dilemma</i>	206
Innovation and Clustering: Getting the Right Group of Things Together	206
Choose Simplicity	207
Simplification Is the Essence of Intellectual Property	207
Consider the Problem Before the Solution	208

Define the Problem	209
Sleep on It	209
Is It Strategic or Tactical?	210
Becoming a Innovative Architect	210
Bibliography	211
Chapter 11 Pragmatism	213
Pragmatic Architecture Defined	213
Scope Management	214
Work with the Business to Determine Feature Priority	215
Help Executives Make the Right Decision	216
Deal with Ambiguity	216
Sometimes, You Just Need to Start with a Concept	216
Use Agile Processes as a Means to Pragmatism	216
Risk Management	217
Differentiate Between Possible and Feasible	217
Ask Yourself Key Questions About Every Decision	219
Deal with Likely Risks	220
Architectural Spikes	220
Work with Operations to Determine Efficiency	220
Observe Other Projects to Determine What Is Acceptable to Sacrifice	221
Communication	221
Document Agreed-Upon Resolutions	221
Present Multiple Alternatives and Make a Recommendation	223
Use Transparency to Level Expectations	223
Develop Rules of Thumb for Sizing Projects	223
Becoming a Pragmatic Architect	224
Bibliography	225
Chapter 12 Vision	227
Vision Defined	227
Finding and Establishing a Compelling Destination	228
Discovering Your Vision	228
Crafting a Compelling Story from Vague Facts	230
Overcoming Roadblocks	231
Developing and Establishing a Strategic Roadmap	232
Mapping the Route to Your Vision	233
Establishing Strategies to Support the Vision	234
Establishing Aligned Partners	235
Vision Requires Alignment	235

Vision Requires Key Stakeholders	236
Vision Requires Funding	237
Vision in Practice	238
Using Vision to Increase ROI as a Strategy	238
Using Vision to Instill a Sense of Purpose	239
Applying Vision During Project Estimation	240
Developing a Spending Envelope (Scoping the Vision)	240
Becoming an Architect with Vision	241
Bibliography	241
Index	243

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PREFACE

The soft stuff is always harder than the hard stuff.

—Roger Enrico, Vice Chairman, Pepsico

As you start reading this book, I hope you are prepared to keep an open mind and are willing to try some new approaches to your daily life.

My name is Dave Hendricksen, and I have the privilege of being a software architect for Thomson Reuters, where the focus of my work is on producing intelligent legal information. This includes everything from data capture to data display of legislative, regulatory, and intellectual property materials on Westlaw.com. I have been married for 22 years to a beautiful lady. We have two great kids, one cat, one dog, and a koi pond.

As a technology person, I have always considered myself to be slightly different from the rest of the “normal” world. Thinking analytically, focusing on problem solving, building things, and gaming for hours on end all come quite naturally to me. I love to learn new things. For me, going to school has always been great fun; I have a bachelor’s degree in math and Bible and two master’s degrees (one in computer science and one in the management of technology).

I love to work hard and am willing to put in whatever amount of effort is needed to get a project done on time. I love to hear my boss say, “Great job, Dave.” Of course, my thinking would be this: Do great work, get promoted, and life is awesome—and to a degree, this has been true, at least up to the point where technology enters management. An invisible ether exists here that prevents a large number of talented individuals from moving up the organizational hierarchy and any further in their careers. This magical ether detects a lack of soft skills and quietly prevents these individuals from advancing to the next rungs of the ladder.

My goal for this book is to enable you to learn the essential soft skills that you will need to master as a software architect.

This book assumes that you already have the requisite technical skills to become an architect; as such, it does not focus on these types of skills. Instead, this book focuses on 12 essential soft skills that are critical to the daily activities of being an architect. These are the skills that are typically the most challenging for people with technology backgrounds.

The 12 skills in this book are organized into three groups: relationship skills, personal skills, and business skills. These classifications are based on the notion of relative priority; that is, if you don't have relationship skills, the other two areas don't matter. You are not likely to be promoted to the position of architect or to stay in the role of architect for long if you do not relate to people and various parts of your organization well. Similarly, if you don't have the necessary personal skills, business skills will not be deemed as important. In the end, all of these areas are important, but from a prioritization perspective, if you don't have the foundation skills of relationships mastered first, working on business skills will not have the impact that you are likely looking for.

I view this as a pyramid of skills, which is depicted in Figure Pref-1.

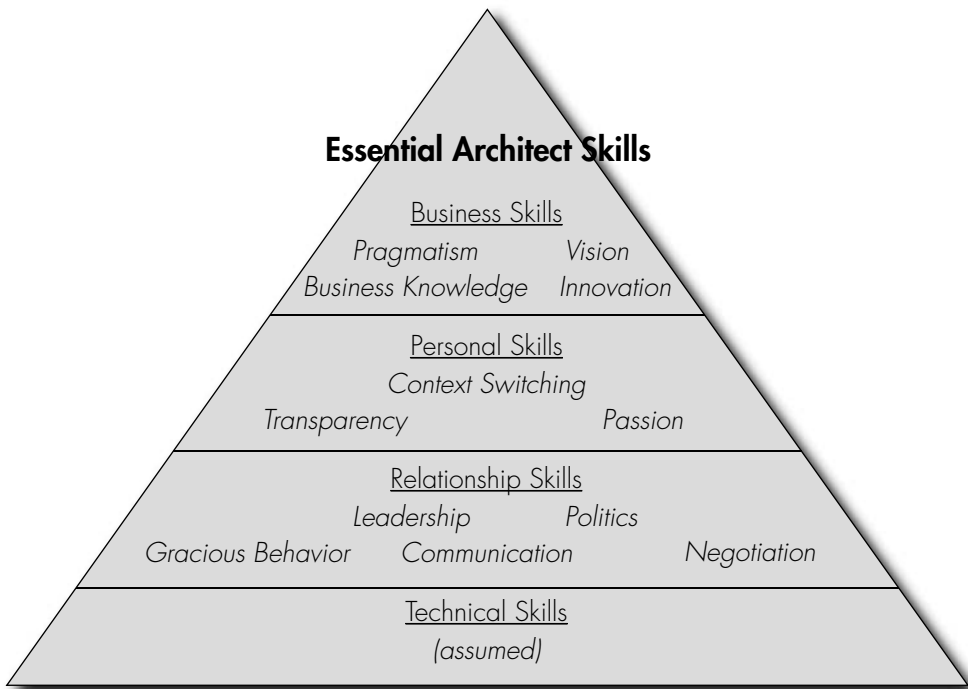


Figure Pref-1 Essential architect skills

I hope you enjoy reading this book and learn some new things that will enable you to become an architect, improve your skills as an architect, or better understand the nature and role of an architect. If you have any questions or comments, feel free to email me at dave@hendricksen.org.

Have great day!

Dave

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In addition, I want to thank Brad Appleton, Bob Maksimchuk, and Davie Sweis for their insights and detailed reviews of this book. I would also like to say thank you to Colin Renouf for his very detailed review of this book and for the knowledge of psychology that he shared with me. I also want to thank my wife, Jennifer, and my son, Tim, for taking time to review the book.

Finally, I want to thank my family and parents for their patience and support while I completed this book.

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ABOUT THE AUTHOR

Dave Hendricken is a software architect for Thomson Reuters.

Dave enjoys working closely with new product development teams to create innovative legal products for large-scale online platforms such as Westlaw.com.

In his spare time, Dave enjoys mentoring the Eagan High School Robotics team, downhill skiing with his kids, fishing for large-mouth bass, golfing early in the morning, and spending time at the cabin building things like trebuchets, go-carts, and rain barrel watering systems with his kids.

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PART I

RELATIONSHIP SKILLS

Technology does not run an enterprise; relationships do.

—Patricia Fripp

The most important single ingredient in the formula of success is knowing how to get along with people.

—Theodore Roosevelt, U.S. President

I am convinced that nothing we do is more important than hiring and developing people. At the end of the day you bet on people, not on strategies.

—Larry Bossidy, CEO of Allied Signal

If you wish to make a man your enemy, tell him simply, “You are wrong.” This method works every time.

—Henry C. Link

The real art of conversation is not only to say the right thing in the right place, but to leave unsaid the wrong thing at the tempting moment.

—Lady Dorothy Nevill, English Writer

This first part of the book focuses on the five essential relationship skills for an architect. Specifically, Chapters 1 through 5 focus on principles, strategies, and other areas such as interacting with executives that will help you become more effective in managing your architectural relationships:

- **Chapter 1: Gracious Behavior.** Your ability to be gracious with others in all circumstances.
- **Chapter 2: Communication.** Your ability to effectively interact with others.
- **Chapter 3: Negotiation.** Your ability to get things done.

- **Chapter 4: Leadership.** Your ability to influence what and how things get done.
- **Chapter 5: Politics.** Your ability to interact in a political marketplace.

Relationship skills are the foundational layer of the soft skills needed to be an architect (see Figure P1-1).

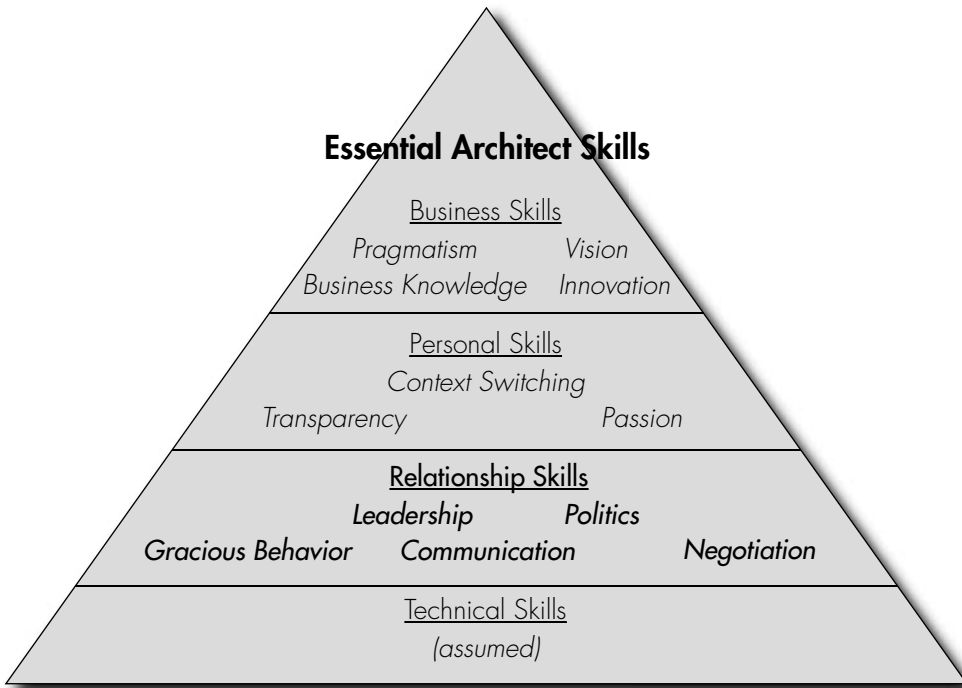


Figure P1-1 Essential architect skills: relationship skills

GRACIOUS BEHAVIOR

Behavior is a mirror in which every one displays his own image.

—Johann Wolfgang von Goethe

The true test of character is not how much we know how to do, but how we behave when we don't know what to do.

—John W. Holt, Jr.

Act the way you'd like to be and soon you'll be the way you act.

—George W. Crane

Working as an architect requires you to interact with a wide range of individuals throughout an organization. To be truly successful in this position, you need the best ideas and thoughts from everyone you encounter. One of the best ways to engage everyone (even those people whom you don't agree with or even necessarily get along with) is to be gracious and professional in all circumstances.

Gracious behavior is a strong tenant of FIRST Robotics (an organization that is dedicated to inspiring young people to become science and technology leaders). Gracious behavior is the notion of doing one's work both graciously and professionally.

This chapter unveils one of the key essential soft skills needed by a software architect—being gracious in all circumstances.

HOW WOULD OTHERS DESCRIBE YOU?

If I were to run into some people who know you (your neighbors, coworkers, family, and so on), how would they describe you?

- Would they say you are hard-working?
- Would they say you have integrity?

- Would they say you are gracious?
- Or would they go into a long list of soft-skill challenges, all confirming that you are, well, a typical technical person—great in the technical arena, but not so much when it comes to soft skills?

THE TECHNICAL CEILING

One of the challenges that the very best technology folks (the gurus—the ones you go to when you have a difficult problem that must be solved and solved right) often have is that they are often a complete pain to deal with. Their approach and means of interacting are completely focused on correctness to the minutest detail. Does this description sound familiar?

Often, you can barely get through a conversation without these individuals issuing a play-by-play analysis of the minor variations of incorrectness being conveyed. By the time you are done explaining the problem, you are tired.

When they come back and the problem is solved with an elegant solution, the customer is thrilled. But the next time you need to ask them to do something, you always weigh the personal costs you need to endure to get the solution. You think to yourself, “Is it truly worth it?”

When review time rolls around, these technology mavens receive stellar comments about the great work they have done. The feedback about their poor soft skills is usually overlooked or perhaps mentioned as a small comment. Year after year, reinforcement is given that the way they approach their work is excellent. Unfortunately, the technical barrier to their advancement within the organization is often growing thicker.

As time progresses and an individual in this situation seeks a promotion, he or she faces several challenges. One key challenge is that senior management does not care to be critiqued by someone located below them on the organization chart. As a consequence, the managers and directors between this individual and the executive are unlikely to want to be associated with the negative repercussions of exposing this person to an executive.

The problem for the technology person—who is clearly talented—is that he or she needs an executive sponsor to move up in the organization. If the manager or director decides to take a chance and bring the “talented” individual to a meeting and the executive gets “roasted,” the executive’s first impression of the person will be negative; it will take years for that person to overcome the first bad impression, and the manager will be really sorry that