



DECISION



QUALITY



Value Creation from
Better Business Decisions

CARL SPETZLER

HANNAH WINTER

JENNIFER MEYER

WILEY

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Praise for *Decision Quality*

"No one has coached more businesses through high-stakes strategic decisions than Carl Spetzler and the team at SDG. If you're looking for wisdom on making better decisions in your business, you've come to the right place."

—Chip and Dan Heath, Bestselling Coauthors including *Decisive: How to Make Better Choices in Life and Work*

"I've been a fan of the decision quality approach for many years. I try to share it with analysts and engineers with whom I work because we are often drawn toward solving analytically complex problems without enough attention to framing problems well, managing uncertainty, and engaging with organizations from start to finish. The decision quality framework is an excellent guide for consultants, technical experts, and program managers to achieve the most impact from their work."

—Thomas Olavson, PhD, Google Inc.

"Implementing the decision quality processes described in this book should become the 'new normal' for all organizations and their leaders. Complex or not, decision making at the product, service, or human capital level involves dealing with uncertainty and re-examining assumptions. This book provides the perfect framework for doing this mission-critical work—and making the best choices possible for building work environments and corporate cultures for top performance and innovation."

—China Gorman, Former CEO, Great Place to Work Institute

"From beginning to end, this book underscores the business benefits that accrue from investing in decision quality processes. The authors offer actionable steps that leaders can take to check biases rooted in deeply held beliefs and steer their organizations toward better value creation."

—Philip E. Tetlock, PhD, Bestselling Author including *Superforecasting: The Art and Science of Prediction*

"Making the right decisions is critical to the success of every organization. The framework as presented in this book by Carl Spetzler and his colleagues puts rigor and quality into the very difficult and seemingly complex decisions that we have to make as business leaders. Applying it has served me well throughout my career, sometimes resulting in counterintuitive outcomes. For me this is a clear 'must read' for everyone in a leadership position."

—Gerard Kleisterlee, Chairman, Vodafone Group Plc

"True decision quality is highly elusive, yet its impact on an organization is enormous. In this book, the authors deliver an approach and philosophy that can provide an immediate and positive impact on personal and business decisions. Books that achieve this in such a readable format are rare indeed. Acquiring a copy could be the first in a series of quality decisions!"

—Andrew Evans, MBA, Unilever; Fellow, Society of Decision Professionals

"A very savvy, sorely needed systematic approach to making uncertainty an integral dimension of the questions we ask and the answers we seek. Their strategy shows you how to judge the quality of your decisions without knowing or relying on outcomes that may or may not be a reflection of the actual decision process."

—Robert A. Burton, MD, Bestselling Author including
On Being Certain: Believing You Are Right Even When You're Not

"Carl Spetzler has been working on how to improve business decision quality for half a century. Everyone who wants to make better business decisions would benefit by learning the lessons in this book."

—Ronald A. Howard, ScD, Professor, Stanford University School of Engineering

"Decision quality is one of the most chronically overlooked sources of value in industry today. This book describes a set of principles and techniques that companies and individuals alike can use to improve the quality of their decisions and, ultimately, grow their bottom line. It is a practical and valuable guide for anyone seeking to improve their own or their organization's decision making."

—Joe Melvin, MBA, Genentech, Inc.

"*Decision Quality* takes us back to the beginning. After decades of focus on 'execution,' this book offers a practical and vivid primer on starting from the right decisions in the first place."

—Richard Whittington, PhD, Saïd Business School, University of Oxford

"Simply put, this book provides with great clarity a framework for decision-making quality that unquestionably works. We adopted this framework at NCI Building Systems, Inc. because it encourages our collaborative culture, helps us create value, and helps us avoid mistakes."

—Norman C. Chambers, Chairman, President and CEO, NCI Building Systems, Inc.

"The authors have done a masterful job explaining the essence of decision quality in a book that is a 'must read' for everybody. They have compiled their life-long experience of personal and professional decisions to help readers recognize that decisions can be improved and that decision quality creates value."

—Ali E. Abbas, PhD, USC; Director, Center for
Interdisciplinary Decisions and Ethics (DECIDE)

"This book illustrates the plethora of positive professional and personal results possible when implementing decision quality processes. Most important, it does this by paying close attention and respect to the multiple dimensions associated with decision making—in particular, to biases often resulting from various cultural and emotional beliefs. I recommend this book to anyone who wants to see improvement in their decision-making skills."

—Paul Slovic, PhD, University of Oregon; President, Decision Research

"I've successfully applied the SDG decision quality process in complex energy-sector situations over the past 20 years, optimizing outcomes and creating value measured in billions of dollars. The SDG decision quality process works."

—Harold "Hal" N. Kvisle, MBA; Former CEO (Retired), TransCanada Corporation;
Former CEO (Retired), Talisman Energy Inc.

"The content provided by the authors of this book is an excellent example of the words of C. West Churchman: 'The value of information is in its use . . . not its collection.' The book makes available their extensive experience in helping others wisely use information in the decision-making process. I can say from personal experience this well-articulated approach can provide others, with less experience or attainment in supporting decision making, the opportunity to apply what has been learned to improve their contribution to the decision-making process of their enterprise."

—Vincent Barabba, Chairman and Cofounder, Market Insight Corporation; Former GM, Corporate Strategy and Knowledge Development, General Motors Corporation

"DQ is an important contribution to improving the strategies companies choose. It is leaps and bounds beyond the contributions of the listing techniques that I see in other books on strategy. Readers here learn DQ's framework and processes from three noted experts in the field."

—Steve Galatis, MBA, Director, Asset Strategy, Global Pharmaceutical Company

"I have seen decision quality change lives and transform businesses. From the executive suite to the family dinner table, I know these principles work."

—Larry Neal, Independent Decision Professional;
Former Decision Analysis Manager, Chevron Corporation

"An insightful book. The reader learns that decision making is a process—not a one-time event. Further, the reader experiences the 'art and science' of making better decisions with real-time examples. As a champion of DQ my entire professional life, I'd say this book is long overdue. Both individuals and organizations will benefit from its profound message."

—James Lang, CEO, Decision Resources Group (DRG)

"The decision quality approach and framework discussed in this book are especially valuable to non-profits as they strive to achieve large social goals on limited resources. Provided here are the critical skills required in any environment to make the best decisions possible—particularly those having very little 'give' for margin of error."

—Amie Batson, MBA, Chief Strategy Officer, PATH

"I was introduced to the decision quality process by Carl Spetzler and the SDG team in 1987. I have successfully applied its principles in numerous complex, uncertain situations. This book is essential reading for strategic decision makers."

—Thad "Bo" Smith, Chairman and CEO, Smith Global Services

"The explosion of data, speed of change, and level of uncertainty in today's organizations can make sound decision making a daunting prospect. The DQ framework provided here can help leaders improve the quality of their decisions and drive better outcomes for their organizations."

—Joyce Maroney, MBA, Director, The Workforce Institute at Kronos

"Quality decision making is a skill that can be learned, and a discipline that must be practiced by managers and leaders. This book is filled with powerful and proven methodologies and tools to enable managers and leaders to make and execute good decisions—a clear pathway to better value creation."

—Caroline Wang, MSc, MA, HKUST Business School

"My patient support program has used the decision quality principles outlined in this book to guide thousands of patients through life-and-death decisions. Extensive research studies, including randomized controlled trials, have shown the benefits to patients. Compared to usual care, patients who use these techniques become more informed and involved in their decisions, and have better outcomes. I have also used decision quality as a leader to manage my team. It's a cognitive framework that you can use at organizational as well as interpersonal and individual levels. No one has done more to advance the field of decision quality than Carl Spetzler and his colleagues at SDG. Decision quality is the next frontier in the quality movement. Read this book to stake your claim on the future."

—Jeff Belkora, PhD, Associate Professor of Surgery and Health Policy, UCSF

"It's my absolute pleasure to recommend this book, as I know firsthand DQ works—and this book is the ultimate DQ reference, written by the leaders in the field."

—Ibrahim Almojel, PhD, Saudi Aramco Investment Management Company

"This book will have a prominent position on my library shelf. Nothing is more important in business management and leadership than being a champion of decision quality. Transformative leaders make decisions that encompass both their gut feelings and whatever empirical evidence is available. This text is right on cue. The best decision for you right now, is to make the decision to buy this book, learn from it, and turn it into valuable action for you and your organization."

—Nick Bontis, PhD, McMaster University;
Director, Center for Intellectual Capital Research

"One of the challenges for any leader is to create an environment where quality decisions are made on a consistent basis. This book is for all of us who want to assemble the building blocks of decision quality and decision making in our organizations. In my opinion, it should be required reading for those of us who work in complex environments where a clear guide to the discipline of generating decision quality is an imperative."

—Jim Wiggett, CEO, Bebe Stores, Inc.; Former CEO, Sephora.com

"At Chevron, during my tenure, we adopted DQ for all major decisions—for the simple reason that it works. A lot of the benefit comes from better framing discussions at the front end of decision making."

—David J. O'Reilly, Former Chairman and CEO, Chevron Corporation

"I have a lot of respect for SDG as an organization—and even more so now, knowing this book was authored by three members of the SDG team. It offers a simple yet comprehensive decision-making framework, and explains in practical terms why, for example, a human resources specialist might see a particular organizational problem as a people issue, yet an engineer might see the same problem as a series of technology issues. Most important, the book shows how to grow and bridge decision quality across functional units—something organizations need to know for competitive advantage."

—Debra Engel, MS, Board Member, Institute for the Future;
Senior Executive Advisor to Silicon Valley Emerging Growth Organizations

"We are all susceptible to the traps and biases that lead us to make questionable decisions. The framework, principles, and practices described in this book really do work to improve decision-making quality, both in personal life and the corporate setting."

—Peter Ray, MBA, Vice President, Global Pharmaceutical Company

*To the many DQ champions who share our passion for
making the common sense of decision quality truly common.*

Acknowledgments

We have the benefit of standing on the shoulders of giants. The decision quality (DQ) framework for making better decisions is built on decision theory, which was developed over a couple of centuries by great minds like Laplace, Bernoulli, Ramsey, and many others. The thought leadership provided by Ron Howard at Stanford and Howard Raiffa and his colleagues at Harvard over the last 50 years turned this theory into a practical discipline for making better decisions. In addition, the behavioral decision sciences also made great advances in the understanding of human nature necessary to overcome biases and decision traps. Thought leadership in that field was provided by Amos Tversky, Daniel Kahneman, and Ward Edwards.

The authors have been part of the school of thought that grew around Ron Howard (and many of his graduate students) and have benefited from and contributed to this community of decision professionals. Our employer, Strategic Decisions Group (SDG), is a part of this community and has an educational partnership with the Stanford Center for Professional Development that provides a certificate program in Strategic Decision and Risk Management (SDRM). Barbara Mellers co-taught the SDRM “Biases in Decision Making” course with us for about seven years, which led to the framework for the categorization of biases presented in this book.

We want to thank our original co-creators of the DQ framework, in particular, Ron Howard, Tom Keelin, James Matheson, and Mike Allen. All of our colleagues at SDG have helped advance the science and practice of decision quality. The practical value of DQ has been proven, thanks to the many clients that provided the experience and demonstration of value creation from better decisions. And the message has been honed, thanks to the tough questioning of many astute students.

Special thanks are due to Bruce Judd, SDG's master teacher, who provided many valuable comments on a draft of the book. Richard Luecke, writer/editor, and Martha Abbene, graphic designer, were key members of our team in the book's development.

We also thank our dear families who have patiently supported us during many months of work on this project.

We are, of course, responsible for the errors and omissions in this book.

Carl Spetzler
Hannah Winter
Jennifer Meyer

Preface

Poor-quality decisions are endemic in business today. As Paul Nutt remarked in his 2002 book *Why Decisions Fail*, “Half of the decisions made in organizations fail, making failure far more prevalent than previously thought.”¹ Unfortunately, things have not improved dramatically since then. Bad decisions continue to fill headlines and impact organizations around the world. The result is a tremendous amount of lost economic value for companies and shareholders, as well as for the world economy. And business is not the only source of bad decisions. People in organizations of all kinds—government agencies, non-profits, and many more—also make poor choices with costly consequences, as do individuals making personal decisions.

The quality movement, which gained traction in the United States in the 1980s, has measurably helped its adherents to do things *right*: faster, better, at lower cost. Unfortunately, the philosophy of quality has not extended to decision making. In the executive suites and conference rooms where important decisions are made—where doing the *right things* is the goal—decision makers are not making the best decisions they can. Few organizations have quality-based processes for tackling big, multimillion-dollar choices, or mechanisms for fending off the human biases and faulty assumptions that result in many decision traps. The result is a great deal of low-quality decisions.

Fortunately, it doesn't have to be that way. Decision skills, processes, and tools based on the *decision quality* (DQ) framework can be learned and implemented. Many of the tools and processes can be readily applied by any decision maker who learns basic decision skills. Others require some decision support—either analytical or facilitation. All of the tools and processes yield insights that are accessible to anyone.

DQ is a philosophy based on the principles of decision theory that have been developed over the past 300 years. Decision theory is a normative philosophy that provides the rules for rational thought for people to get the most of what they truly want in the face of uncertainty. That field got a big boost about 50 years ago, when professors Ron Howard of Stanford and Howard Raiffa of Harvard transformed its philosophical and theoretical constructs into the practical and applied discipline of *decision analysis* (DA). DA addresses the complexities of making decisions in the face of uncertainty, dynamics (multiple rounds of deciding and learning), and multiple factors that affect value.

About 35 years ago, Ron Howard and Carl Spetzler, with their partners at Strategic Decisions Group (SDG), began combining DA principles with insights from behavioral decision-science research. The goal was to help organizations deal effectively and efficiently with the practical challenges of complex decisions. This led to the DQ framework that is the basis of this book. DQ is at the center of the service offerings of SDG, where each of the three authors has decades of experience helping global businesses improve their strategic decisions. Today the DQ framework forms the core knowledge of a large and growing group of decision professionals who assist leaders around the world with strategic decisions.

* * *

The authors of this book are often asked, “Aren’t most businesses and individuals already making high-quality decisions?” The answer is no. Because people make decisions every day, they naturally believe that they already know how to do it well. The truth is that the ability to make good decisions is not inborn. One might even say that the ability to make good decisions is *contrary* to human nature. Fifty years of behavioral decision science research have revealed hundreds of biases that are part of human mental processes and social behaviors. Thus, although people widely believe that they are inherently good decision makers, this belief is an illusion—a dangerous one. The biggest challenge to achieving DQ is recognizing this illusion and understanding that there is room for substantial improvement.

DQ can dramatically improve decisions. Those who learn it and see its benefits often have an “Aha!” experience. They understand that DQ can change their decisions for the better, and they don’t want to be without it.

They become DQ champions, using the framework on their own decisions and also spreading the word about DQ to others: their colleagues, their children and family members, their communities, and beyond.

The purpose of this book is to bring decision quality to a broader audience. Its aim is to provide an understanding of DQ: what it is, what it requires, and how it can be achieved through practical processes. The book draws from the decision sciences and decades of real-world application, presenting a straightforward, understandable framework that can be readily applied by anyone. Its chapters are punctuated by examples and anecdotes—DQ in action—drawn from SDG’s decades of work with organizations in many industries. Because DQ is relevant for all types of decisions, readers will be able to apply what they learn to both their business and personal decisions.

The concepts offered in this book will help readers learn the decision skills needed to reach high-quality decisions. Readers should include anyone who has, or aspires to have, substantial decision responsibility—business owners, executives, managers, and leaders in every industry and in organizations of every size. For decision professionals who provide support for strategic choices, the book will serve as a useful resource to share with decision makers.

* * *

Decision Quality: Value Creation from Better Business Decisions is organized into four parts. Part I consists of three chapters that present the entire DQ framework—the big picture. The first chapter answers the question “Why is decision quality needed?” The second chapter presents an overview of DQ’s six essential requirements, answering the question “What is DQ?” The third chapter addresses the question “How can we achieve DQ?”

Part II explains each of the six requirements for DQ in detail, dedicating a chapter to each. Those chapters describe each requirement, introduce relevant tools, and help readers to develop the ability to judge the quality of decisions *before* they make them.

Part III offers time-tested processes for reaching DQ. Chapters 10 and 11 describe the biases and decision traps that so often prevent smart people from making the best possible decisions. Chapters 12 and 13 contain details on processes that readers can use to achieve decision quality. Both methodology and application examples are provided.

Part IV offers insights on the journey to achieving DQ. A strategic application shows the power of the tools of decision analysis. Then, the concepts of organizational DQ are introduced, along with an approach for how to achieve it. The final chapter offers suggestions to readers who want to begin using DQ on their decisions.

* * *

The authors' sincere hope is that the concepts and examples offered in these chapters will enhance the decision-making powers of every reader, making their lives, and the fortunes of their organizations and communities, measurably better.

Carl Spetzler
Hannah Winter
Jennifer Meyer
Palo Alto, California

Endnote

1. Paul Nutt, *Why Decisions Fail: Avoiding the Blunders and Traps that Lead to Debacles* (San Francisco: Berrett-Koehler Publishers, Inc., 2002), 22.

Contents

Acknowledgments	xiii
-----------------	------

Preface	xv
---------	----

PART I

The Decision Quality Framework 1

1 The Power of Decisions	3
<i>Decision Quality: A Framework for Better Decisions</i>	4
<i>Decision Skills Can Be Learned</i>	5
<i>Decisions versus Outcomes</i>	6
<i>Key Points to Remember</i>	8
<i>Endnotes</i>	9
2 The Requirements for Decision Quality	11
<i>The Appropriate Frame</i>	13
<i>Creative Alternatives</i>	13
<i>Relevant and Reliable Information</i>	14
<i>Clear Values and Tradeoffs</i>	15
<i>Sound Reasoning</i>	16
<i>Commitment to Action</i>	16
<i>Judging the Quality of a Decision</i>	17
<i>Key Points to Remember</i>	19
<i>Endnotes</i>	19
3 Getting to Decision Quality	21
<i>Declaring the Need for a Decision</i>	21
<i>Setting the Decision Agenda</i>	23
<i>Understanding the Destination of Decision Quality</i>	23
<i>Avoiding Decision Traps and Biases</i>	24
<i>Designing the Decision Process through Diagnosis</i>	25
<i>Tailoring to Fit the Decision</i>	30

<i>Key Points to Remember</i>	32
<i>Endnotes</i>	33

PART II

The Six Requirements for DQ 35

4	The Appropriate Frame	37
	<i>A Friday Afternoon Dilemma</i>	37
	<i>The Key Components of a Frame</i>	39
	<i>Framing the Friday Afternoon Dilemma</i>	41
	<i>An Extended Example: The House Decision</i>	42
	<i>Developing an Appropriate Frame</i>	43
	<i>The Decision Hierarchy: A Tool for Framing</i>	44
	<i>Things That Can Go Wrong</i>	46
	<i>Judging the Quality of a Decision Frame</i>	47
	<i>Key Points to Remember</i>	49
	<i>Endnotes</i>	49
5	Creative Alternatives	51
	<i>Characteristics of Good Alternatives</i>	53
	<i>The Strategy Table: A Tool for Defining Alternatives</i>	56
	<i>Things That Can Go Wrong</i>	57
	<i>Judging the Quality of Alternatives</i>	60
	<i>Key Points to Remember</i>	63
	<i>Endnotes</i>	64
6	Relevant and Reliable Information	65
	<i>Information from a Decision Perspective</i>	65
	<i>An Extended Example: Michael's Job Choice</i>	67
	<i>Structuring the Relevant Information in a Decision</i>	68
	<i>The Decision Tree: A Tool for Structuring a Decision</i>	68
	<i>What Is Reliable?</i>	72
	<i>Things That Can Go Wrong</i>	74
	<i>Judging the Quality of Information</i>	75
	<i>Key Points to Remember</i>	78
	<i>Endnotes</i>	79
7	Clear Values and Tradeoffs	81
	<i>Values and Tradeoffs for Decisions</i>	82
	<i>Michael's Values and Tradeoffs</i>	82
	<i>Values in a Business Context</i>	85
	<i>Making Tradeoffs in Business Decisions</i>	86
	<i>Things That Can Go Wrong</i>	88
	<i>Judging the Quality of Values</i>	89

<i>Key Points to Remember</i>	91
<i>Endnotes</i>	91
8 Sound Reasoning	93
<i>Reasoning for Michael's Job Decision</i>	94
<i>Reasoning in More Complex Decisions</i>	97
<i>The Relevance Diagram: A Tool for Structuring Complex Decisions</i>	97
<i>The Decision Model: A Tool for Analyzing Complex Decisions</i>	98
<i>The Tornado Diagram: A Tool for Displaying the Relevance of Information</i>	99
<i>Flying Bars: A Tool for Displaying Overall Uncertainty</i>	102
<i>Things That Can Go Wrong</i>	103
<i>When to Get Help with Reasoning</i>	104
<i>The Power of Iterating from a Simple Start</i>	105
<i>Judging the Quality of Reasoning</i>	105
<i>Key Points to Remember</i>	109
<i>Endnotes</i>	110
9 Commitment to Action	111
<i>Two Mindsets: Decision and Action</i>	111
<i>Commitment through Participation and Ownership</i>	113
<i>Conscious Commitment</i>	115
<i>Things That Can Go Wrong</i>	115
<i>Judging the Quality of Commitment to Action</i>	117
<i>Key Points to Remember</i>	119
PART III	
How to Achieve DQ	121
10 Biases and Traps in Decision Making	123
<i>Mechanisms of the Mind</i>	123
<i>Protection of Mindset</i>	126
<i>Personality and Habits</i>	128
<i>Faulty Reasoning</i>	130
<i>Automatic Associations and Relative Thinking</i>	133
<i>Social Influences</i>	137
<i>Summing Up</i>	138
<i>Endnotes</i>	139
11 Megabiases that Undermine DQ	143
<i>DQ and Megabiases</i>	144
<i>Megabias #1: Narrow Framing</i>	144
<i>Megabias #2: The Illusion of DQ</i>	147
<i>Megabias #3: The Agreement Trap</i>	149
<i>Megabias #4: The Comfort Zone Megabiases</i>	150