



SECOND EDITION

THE SUSTAINABLE ENTERPRISE FIELDBOOK

BUILDING NEW BRIDGES

Edited by Jeana Wirtenberg, Ph.D.,
with Linda M. Kelley, David Lipsky, Ph.D., and William G. Russell



A **Greenleaf Publishing** Book

“WOW! This incredible work defines both the breadth and depth of the sustainability movement. The Activities, Cases, and Tools delineate the qualities of a sustainable enterprise with insight, practical value, and passion. It will shape the path to a better world for at least another 10 years. Mega-kudos to the authors for this amazing compendium, the definitive statement of the sustainable enterprise.”

*Dave Ulrich, Rensis Likert Professor,
Ross School of Business, University of Michigan, and Partner,
The RBL Group, USA*

“*The Sustainable Enterprise Fieldbook* is a collection of deep context and practical tools to help every reader equip their organization for the sustainable future. The authors have crafted a rich read with hundreds of case studies and perspectives ranging from Pope Francis to the animal kingdom to Mark Twain. There are countless books about the future of sustainable business, but none stitch together the historical wisdom, activation methods and storytelling like *The Sustainable Enterprise Fieldbook*.”

Dave Stangis, Chief Sustainability Officer, Campbell Soup Company, USA

“As sustainability becomes the business of the 21st century, it is essential that responsible executives and managers have the tools and mindsets to help navigate the challenges facing this transition. *The Sustainable Enterprise Fieldbook* is a helpful guide for those seeking to add their mark on the larger sustainability movement, and can help ensure that companies and organizations act as positive agents toward this future.”

Jonas Haertle, Head of PRME, United Nations Global Compact

“Sustainability management is a core competency and a competitive advantage. Most managers must overcome barriers to change, while building a culture of sustainability. Dr. Wirtenberg, Linda M. Kelley, David Lipsky and William G. Russell have created an excellent guide with change management tactics that will ensure performance is optimized. This book will prepare you to become certified in the profession as a Sustainability Management Certified Professional, SMCP.”

*Angela Casler, SMCP, CEO/President,
Sustainability Management Association, USA*

“As we move into the 2020s – facing an array of critical social and environmental challenges – no task has more urgency than the building of sustainable enterprise. The updated Fieldbook retains the practical focus of the first edition, while also helping practitioners understand the holistic sustainability advantage that arises across the enterprise, from mission-aligned strategy to employee engagement to metrics. The Fieldbook is a terrific practical guide for a sustainability transition.”

*Eban Goodstein, Director, Graduate Programs in
Sustainability, Bard College, USA*

“This important update of *The Sustainable Enterprise Fieldbook* offers so much valuable and practical guidance for any manager to help his or her company become a sustainability leader. With its particular emphasis on people, their mental models, the development of new behaviors and expectations, and the metrics and feedback by which progress can be evaluated, this book goes to the core of how to motivate change in any organization and help us strive for, in the words of John Ehrenfeld, a flourishing and sustainable world.”

*Andrew J. Hoffman, Holcim (US) Professor of Sustainable Enterprise,
Ross School of Business/SEAS, University of Michigan, USA*

“The authors’ holistic representation of sustainable globalization using a six-lens framework is an incredibly useful addition to the decision-making toolkit of business leaders and managers driving strategic initiatives in multinational firms. It is an especially valuable resource for managers seeking to design and execute global strategies that are aligned with sustainable objectives. This well-researched book not only draws readers’ attention toward numerous environmental and social problems currently facing humanity, using up to date numbers and figures, but also provides insights and detailed examples of specific projects undertaken by multinational firms that have sought to address a few of these problems as part of their sustainability initiatives. This book urges leaders to place sustainability at the core of their business strategy. To this end, it provides conceptual tools and real-world examples to help business leaders find their way to sustainable profits.”

*Pallavi Shukla, PhD, Assistant Professor of Professional Practice,
Rutgers Business School, USA*

“*The Sustainable Enterprise Fieldbook: Building New Bridges* is an excellent resource for students just learning the ropes of organizational sustainability. It paints a clear picture of the current state of sustainable enterprise, where the gaps are, and what needs to be done by both individuals and organizations in order to cross the bridge to achieve true sustainability. In addition to theories and examples, this book provides the tools needed for people – at all levels of an organization – to take action to promote purposeful, sustainable enterprise, making it a valuable resource for both sustainability newcomers and seasoned experts alike.”

*Kinan Tadmori, Master of Business and Science student in Sustainability,
Professional Science Master’s Program, Rutgers University, USA*

“The next time I teach my ‘Sustainable Business’ course, I will certainly be using *The Sustainable Enterprise Fieldbook* as the primary text. Having reviewed the advance copy of the fully revised and updated Second Edition, I am aware of no better resource for faculty and students than this text. The breadth of topics covered ensures an interdisciplinary approach to sustainable business practices with an emphasis on Human Capital, and the depth of each of the chapters, with numerous case studies, will facilitate engaged class discussion.”

*Ira Feldman, Founder & Managing Director,
Sustainability Curriculum Consortium, USA*

The Sustainable Enterprise Fieldbook

With deep thought and inspiring examples, this updated book engages readers by increasing their understanding and awareness of what sustainability means conceptually, practically, personally, and professionally. It provides readers with the tools and techniques to improve the social, environmental, and economic performance of their organizations in both the short and long term.

Since sustainability is not achieved in a siloed environment, everyone has a critical role to play on this journey. *The Sustainable Enterprise Fieldbook* engages today's managers and leaders of organizations, in both the private sector and civil society, who are being challenged as never before to find ways to play a proactive role in understanding and addressing the risks and opportunities of sustainability. It teaches them how to apply systems thinking to turn our most intractable problems into exciting business opportunities, and offers ground breaking frameworks in new chapters on globalization, strategy, metrics, and sustainability models for collaboration, technology, and community.

That is why this book is structured to be a fieldbook to provide practitioners the Activities, Cases, and Tools that they can use to help move their enterprise through progressively higher performing stages of sustainability. Readers will also gain access to the innovative *Living Fieldbook*: an online community forum filled with supporting materials.

Jeana Wirtenberg, Associate Professor of Professional Practice, Rutgers University, USA, and President and CEO, Transitioning to Green, USA.

Linda M. Kelley, Principal and Enterprise Ecologist, Transitioning to Green, USA.

David Lipsky, Head of Coaching, Assessment and Executive Onboarding at Samsung Electronics America.

William G. Russell, Principal with Transitioning to Green, USA.

The Sustainable Enterprise Fieldbook

Building New Bridges

Second Edition

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with Linda M. Kelley, David Lipsky,
and William G. Russell

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First, we dedicate this book to honor the many heroes and heroines whose shoulders we stand on, and highlight here a few of the most notable ones who have passed since the first edition of our book was written.* Second, we dedicate our book to the millions of people around the world who work tirelessly every day to create a better world; and third, we dedicate it to the generations to come, who we hope will inherit a flourishing, sustainable world of endless possibilities for themselves, their children, and their children's children.

*** Jenny Ambrozek (contributing-author in our first edition)**

Ray Anderson

Mila Baker

Warren Bennis

Thomas Berry

Fern Jones

C.K. Prahalad

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About the contributors

Shakira Abdul-Ali, MSOD, CEO and Principal Managing Consultant, Alchemy Consulting, LLC, Trenton, NJ, USA

Abdul-Ali is an organization development specialist, trainer, and coach. Her principal areas of focus are diversity building and economic development initiatives, along with team building and performance improvement through training and coaching. Her clients have included New Jersey Transit; University of Minnesota; Head Start; Cornell University Management Development Program; Merck; Girl Scouts USA; various county colleges in New Jersey (Union, Middlesex, Essex, Camden, and Atlantic Cape); the Collaborative, Inc. (Boston, MA); and America Speaks. Before starting her own firm, Abdul-Ali held a number of public-sector roles, including Chief, New Jersey Office of Minority Business Enterprise; Administrator, New Jersey Small Business Division Office of Technical Assistance; and Assistant Director, New Jersey Governor's Study Commission on Discrimination in Public Sector Contracting.

Abdul-Ali received a BA in Economics and Urban Studies from Wellesley College, and an MS from the American University/NTL Organization Development program. She is an MBTI-qualified facilitator and a certified leader for the National Coalition Building Institute.

John D. Adams, PhD, Organizational Systems PhD Program, Saybrook Graduate School, San Francisco, CA, USA

Adams is Emeritus Professor of Organizational Systems, and was for many years the Chair of the Faculty and the Chair of the Organizational Systems PhD Program at the Saybrook Graduate School (San Francisco). He was also a guest faculty member at The Bainbridge Island Graduate Institute in the MBA in Sustainability program. These programs were each the first of their kind in teaching the principles and practices of sustainability to their learners.

His work in retirement continues to focus on the psychology of successful sustainability initiatives. He is author of *Thinking Today as if Tomorrow*

Mattered: The Rise of a Sustainable Consciousness (2000) and numerous articles and book chapters exploring the role of mental models for sustainability. Adams has been actively speaking, consulting, and writing on this topic since 1990, when he was the chair of the sustainable development task force at The World Business Academy.

Adams is the founder of Eartheart Enterprises, an international speaking, publishing, and consulting business. His clients have come primarily from the healthcare and high tech areas, including work with (HealthCare) the NIH, the NHS in the UK, Holy Cross system, Sisters of Mercy system; and (High Tech) Hewlett Packard, Digital Equipment Corporation (DEC), Sun Microsystems, Naval Air Systems Command. His work has focused on coaching and seminars in areas including sustainable development, health promotion and stress management, effective influence, and successful change implementation.

Adams has also previously served as Manager of executive development and of workplace effectiveness at Sun Microsystems; Director of Professional Development at the NTL Institute; and as Visiting Lecturer at The University of Leeds (UK). He has created 10 books and over 50 articles in the areas of health and stress management, sustainable development, personal effectiveness at work, mental models, and change.

Jenny Ambrozek, BA DipEd, SageNet LLC, Hastings-on-Hudson, NY, USA (1950–2016)

Ambrozek was Founder of SageNet (www.sageway.com), a consulting practice helping businesses create value by applying collaboration and participatory media tools connecting customers, partners, and employees. Ambrozek's online interaction work began in the mid-1980s with Edutel—an educational content service delivered on Prestel standard Videotex for the Australian Caption Centre. She was editor of *The Edutel Book: A Guide to Videotex in Education* (1985).

Coming to the United States in the 1980s, she joined Prodigy Services. In eight years at Prodigy, Ambrozek brought together a wide range of member-engagement components across a range of content areas. As Director, Community Development, she learned firsthand the importance of day-to-day operating practices in minimizing the cost of supporting interaction.

From 1996 Ambrozek helped clients implement successful online network and collaboration efforts to engage customers and promote internal knowledge sharing. With Joe Cothrel, she conducted the *Online Communities in Business 2004* study, contributing to the communities of practice organizational network survey instrument for the Network Roundtable, University of Virginia. Ambrozek was a co-founder and author of the 21st Century Organization blog, and provided her participatory media expertise to the University of Warwick Knowledge Innovation Network, Executive

Networks, and the start-up Acritas. She earned her BA DipEd at Macquarie University.

Gregory S. Andriate, EdD, Organization Innovation LLC, Palm Coast, FL, USA

Andriate is Executive Director of Organization Innovation, a consulting firm partnering with clients to develop sustainable enterprise capabilities for the 21st century. An expert in business innovation and transformational change, he helps organizations reframe, restructure, revitalize, and renew capabilities securing business value for customers and shareholders.

Since 1985, Andriate has led over 30 organizational transformation interventions in Europe and North and South America. His experience includes financial reporting/insurance savings plan conversions, agricultural/pharmaceutical product development cycle improvements, and workscape revitalization initiatives in 22 petrochemical manufacturing sites. His executive coaching experience includes reinventing corporate functions in engineering, communications, ecology/health/safety, finance, human resources, IT, logistics, and procurement.

Previously Andriate was Manager, Executive Development for BASF, responsible for executive competency and high-performance business capabilities development. Earlier, he was Assistant Dean, University of Bridgeport Metropolitan College, responsible for adult degree programs, and a faculty member at Bridgeport, Hartford, New Mexico, and West Virginia universities.

Andriate has published book chapters in *Information and Behavior* and *Communication Yearbook 6* and articles in such journals as *Communication*, *Communication Quarterly*, and *Communication Research Reports*, and has served on editorial boards of two academic journals. He earned his Bachelor's and Master's at Rutgers University and his Doctorate in Educational Psychology at West Virginia University.

Beth Applegate, MSOD, Applegate Consulting Group, Bloomington, IN, USA

Applegate Consulting Group (ACG) is an organization development (OD) practice with three decades of experience with national and international not-for-profit agencies, academic institutions, governmental agencies, and socially responsible for-profits. OD is a values-based system-wide process based on behavioral science knowledge. It is collaborative, and is concerned with the adaptive development, improvement, and reinforcement of strategies, structures, processes, people, culture, and other features of organizational life. OD is rooted in the constructs of human potential and development, empowerment equity, democratic processes and the importance of the use of self as a key to the leadership practices within organizations.

As Applied Behavioral Science practitioner Applegate is well positioned to bring to the fore the tradition of inquiry and dialogue in service of diversity and inclusion, social justice, and healthy individuals, groups, and organizations in the world. Working collaboratively with each client, ACG engages multi-sector organizational clients in a spectrum of change processes to strengthen leadership, team, and organizational effectiveness and sustainability. Applegate teaches a graduate course in the School of Public and Environmental Affairs (SPEA) for Indiana University on increasing understanding of one's own dimensions of difference, often a difficult and disorientating task as we rarely notice "the water in which we swim." Learners examine their own histories and how these inform the lenses through which they approach cultural differences. They are exposed to a variety of conceptual models and practical communication skills, which will allow them to make meaning of and engage effectively across differences.

Applegate has also served as adjunct faculty for American University and Trinity University and regularly speaks and presents at conferences and is an active contributor to the fields of Applied Behavioral Science and Organization Capacity-building. Applegate received the Cultural Competency Award in 2009 from the Alliance for Nonprofit Management for co-authoring *Embracing Cultural Competency: A Road Map for Nonprofit Capacity Builders* (2009). To learn more about Applegate Consulting Group please visit www.applegateonline.com.

Victoria G. Axelrod, MA, Axelrod Becker Consulting, New York, NY, USA

Axelrod is a management consultant and organization strategist. She has extensive experience developing, integrating, and executing company strategy. She is a Principal of Axelrod Becker Consulting (axelrodbecker.com), which develops sustainable growth by identifying new revenue opportunities based on the power of stakeholder networks. Clients are start-ups to *Fortune* 500 companies, nonprofits, and government agencies.

Axelrod is a former Senior Vice President and Head of Global Best Practices for the American Management Association where she doubled the revenue to \$300 million in four years. She is also a Partner of Norman N. Axelrod Associates (a technology planning and solutions consulting firm). She co-founded the 21st Century Organization Group and blog to address issues in today's interconnected technology-driven global business environment (c21org.typepad.com).

Teaching at St. John's University, Tobin College of Business includes courses in Organization Systems for Sustainable Innovation, Business Plans and Entrepreneurship, and American Management and Leadership. She has published and made frequent presentations to groups such as US National Security Agency, Organization Development Network, Human Resource

Planning Society, and the US Chamber Institute. Axelrod has a BA from the University of Michigan and an MA from Columbia University.

James J. Colligan Jr., BSME, MBA, Manager—Operational Excellence Model & Continuous Improvement, PSE&G/PSEG Long Island, Newark, NJ, USA and Hicksville, NY, USA

James (Jim) Colligan is manager of the Operational Excellence Model & Continuous Improvement group for PSE&G and PSEG Long Island. PSE&G is the largest subsidiary of Public Service Enterprise Group (PSEG). PSEG is a publicly traded (NYSE:PEG) diversified energy company headquartered in New Jersey and is one of the 10 largest electric companies in the US. PSE&G currently serves nearly three-quarters of New Jersey's population in a service area consisting of a 2,600-square-mile diagonal corridor across the state. PSE&G serves 1.8 million gas customers and 2.2 million electric customers in more than 300 urban, suburban, and rural communities, including New Jersey's six largest cities. PSEG Long Island is also a subsidiary of PSEG and operates the Long Island Power Authority's transmission and distribution system under a contract which started in 2004.

Colligan is responsible for ongoing development and deployment of technical documentation and continuous improvement (CI) of processes to achieve operational excellence and balanced scorecard results. Through his staff in New Jersey and New York and an extended CI community of more than 300 Lean Six Sigma professionals, he manages progress and results for CI teams. He also supports and coaches senior leaders to develop CI capability in their respective areas to achieve business results.

Colligan joined PSEG in 1980 and has several decades of experience in a variety of line and staff roles in Fossil Production, Corporate Performance Management, Quality & Organization Effectiveness, Delivery Operations Support, Utility Operations Support, and currently Business Performance & Improvement. Colligan has a BSME from New Jersey Institute of Technology and an MBA from Fairleigh Dickinson University.

Colligan is Co-chair of the Conference Board Continuous Improvement Council. He also serves as Treasurer of Wayne Little League and has managed the Challenger League (a special needs baseball team for physically and mentally challenged children) for the past several years. Both in his personal and professional life, he finds his coaching experience to be his greatest asset. He maintains that whether your passion is baseball or business, there is no substitute for working hard, improving, and keeping score to ensure results.

Karen J. Davis, MA, New York, NY, USA

Davis has consulted with organizations globally for over 35 years. Her life's work is in the spirit of Earth wisdom, and her values and practices are grounded in multiple ways of knowing.

Davis is dedicated to building a global community and sustainability by working and learning with colleagues and groups worldwide. She is on the postgraduate faculty in Organizational Behavior and Development at the Universidad Diego Portales in Santiago, Chile. She is a board member of Open Space Institute, is active in the International Organization Development Association, and has been a Trustee of the Organization Development Network. Davis serves on the board of a large healthcare company and on boards of various community and cultural organizations.

Davis's educational background includes specializations in chemistry, counseling psychology, and social psychology. Her music training and experience are significant influences in her work and life. When not traveling or working around the world, she lives in New York City, returning regularly to her native Arizona. Summers, she is on her farm in rural Quebec, Canada, with her virtual office.

Davis describes herself as a "global citizen and gardener." The Earth is her playground and lifelong teacher.

Kent D. Fairfield, PhD, MBA, Silberman College of Business, Fairleigh Dickinson University, Madison, NJ, USA

Fairfield is Associate Professor of Management at the Silberman College of Business, Fairleigh Dickinson University. He spent his early career at Chase Manhattan Bank. Most of that time involved lending money and marketing services. After leading efforts there in training and development, he left Chase and set up Kent Fairfield Associates, consulting on organizational effectiveness.

He later added to his Harvard MBA by earning his PhD in Social and Organizational Psychology at Columbia. After four years at NYU's Wagner Graduate School of Public Service, he joined Fairleigh Dickinson 13 years ago. He soon became Principal in the Institute of Sustainable Enterprise, which does research, public outreach, and education on sustainability issues.

In addition, Fairfield has served a key role in experiential and applied learning for Silberman students. This entails arranging mentor experiences and requiring management students to do "learning management by doing management" through community service projects. He has been named New Jersey Teacher of the Year and FDU's Distinguished Professor for Education. In his off-hours, Fairfield indulges his passion for photography.

Alexis A. Fink, PhD, Intel Corp., Santa Clara, CA, USA

Fink is currently Director, Talent Intelligence Analytics at Intel. Her organization provides original organizational effectiveness research, HR analytics, talent marketplace analytics, and HR systems and tools. Prior to Intel, Fink spent seven years at Microsoft, where her roles included Director of Talent Management Infrastructure. Her career has been characterized by an integrative approach to HR, including developing and implementing competency systems and integrated talent management systems. Her background also

includes work in large scale organizational transformation across multiple industries and contexts. Fink earned her PhD in Industrial/Organizational Psychology from Old Dominion University. In addition to practicing and leading in organizations, she continues to teach, is a frequent SIOP contributor, and an occasional author and journal editor.

Gil Friend, Chief Sustainability Officer, Palo Alto, CA, USA

Friend is Founder and CEO of Natural Logic, Inc., a strategy boutique creating and capturing value at the intersection of business and sustainability; Chairman of Gradient Capital, developing financial platforms to finance the future we seek; and Chief Sustainability Officer for Palo Alto, where he leads the city's "climate moonshot." A lifelong social entrepreneur and sustainability geek, Friend is widely considered one of the founders of the sustainable business movement and was named an inaugural member of the Sustainability Hall of Fame, with Ray Anderson, Amory Lovins, Karl-Henrik Robert, and Bob Willard, and "one of the 10 most influential sustainability voices in America" by *The Guardian*.

For more than 45 years, Friend has helped companies and communities design, implement, and measure profitable sustainability strategies. He served in the California Governor's Office developing early sustainability policies and programs. He was a founding board member of Internet pioneer Institute for Global Communications, founder and executive director of Foundation for the Arts of Peace, and co-founder and co-director of the Institute for Local Self-Reliance, a leading urban ecology and economic development "think-and-do tank," where he pioneered the current "green roof" trend 40 years ago.

Friend has served as MBA faculty at Presidio Graduate School, and California College of the Arts. He lectures widely on business strategy and sustainability issues. He holds an MS in Systems Ecology from Antioch University, has a black belt in Aikido, and is a seasoned practitioner of "The Natural Step" sustainability framework. He was a founding board member of the Sustainable Business Alliance, and currently serves on the board of directors of Inquiring Systems, Inc. and the advisory boards of CleanFish, the Green Chamber of Commerce, Green World Campaign, RePower Capital, Silicon Valley Net Positive Leadership Council, Sustainable Brands, and the Sustainability Accounting Standards Board, and was twice named one of the Bay Area's "top 25 movers and shakers in clean tech."

He is author of *The Truth About Green Business* and *Green Business Field Guide* (2009), hundreds of articles on business and sustainability, and is a contributor to other books.

Joel Harmon, PhD, Institute for Sustainable Enterprise, Fairleigh Dickinson University, Madison, NJ, USA

Harmon is Professor of Management in the Silberman College of Business at Fairleigh Dickinson University, a Distinguished Faculty Fellow of its Center

for Human Resource Management, and Director of Research for its Institute for Sustainable Enterprise. During his 24-year academic career, he has served as Department Chair, President of the University Faculty Senate, President of the Eastern Academy of Management, co-leader of the Sustainable Practices Action Research Community workshop series (1997–2007) at the Academy of Management, and founding member of the Academy's Theory-to-Practice Executive Steering Committee. Before joining academia, he held several management positions in industry.

He specializes in organization strategy and transformation, focusing on linkages between people, learning, and sustainability practices and corporate performance. He has published widely in a variety of leading academic and practitioner journals including *Health Care Management*, *Case Research*, *Human Resource Planning*, *Cost Management*, *Group Decision & Negotiation*, and *Organization Behavior & Human Decision Processes*.

Harmon earned his PhD in Organization Communication and Change from the State University of New York at Albany and an MS in Environmental Policy and Planning from Rensselaer Polytechnic Institute.

Linda M. Kelley, Principal, Transitioning to Green, LLC, www.transitioningtogreen.com. Pittsfield, MA, USA

Kelley works at the nexus where big picture vision meets practical implementation to produce sustainable enterprise that is relevant and contributes to overall prosperity. She is a cultural creative who guides individuals and teams through the process of change to develop the mindset, presence, and capabilities they need to lead and collaborate in the building of a sustainable world.

Her focus is on cultivating professional and personal excellence that bridges the gap between knowing what to do and being able to do it. Kelley's whole systems approach to learning and change enables clients to navigate difficult issues in doable steps that produce rapid, genuine results. As happens with the turn of a kaleidoscope, our accumulated skills and experiences reorder and recombine to make new original patterns time after time; we're always a work-in-progress. It is the rich breadth and depth of our humanness, simultaneously simple and complex in its unfolding, that forms the foundation of Kelley's work as a consultant and coach.

She brings to her consulting, training, and coaching a pragmatic, hands-on perspective gained from 30 years of business experience coupled with her artist's sense of invention, play, and design, and an amateur naturalist's powers of observation. She works with both businesses and government agencies.

Kelley is a leader in forging new ground using virtual technologies for collaborative problem-solving, immersive learning, and advancing collective ingenuity. Delia Lake is Kelley's avatar representative in virtual platforms such as Second Life® where she has worked for over 10 years to raise awareness of and work collaboratively on real-world environmental and sustainability

issues with people around the globe. She does this because she believes that virtual media will provide essential co-creative spaces and interfaces between local and global sustainability initiatives.

Kelley is a co-author of *The Sustainable Enterprise Fieldbook* (2008). She serves on the steering committee of the Downtown Pittsfield Farmers Market, is a member of the core team of the Pittsfield Working Cities Challenge, and formerly was on the board of the Sustainable Business Network of Greater Boston.

Richard N. Knowles, PhD, the Center for Self-Organizing Leadership, Niagara Falls, NY, USA

Knowles is Co-founder and Director of the Center for Self-Organizing Leadership. His work is focused on helping organizations become much more effective through the use of Self-Organizing Leadership.

He served in the DuPont Company for over 36 years beginning as a research chemist (40 patents), then in a variety of manufacturing assignments at Repauno, NJ, Chambers Works, NJ (as Assistant Plant Manager), Niagara Falls, NY (Plant Manager, 1983–1987), Belle, WV (Plant Manager, 1987–1995), and finally as Director of Community Awareness, Emergency Response and Industry Outreach. In 1995 he received the EPA Region III Chemical Emergency Planning and Preparedness Partnership Award.

His leadership work is featured in Tom Petzinger's *The New Pioneers* (1999) and Roger Lewin and Birute Regine's *The Soul at Work* (2000). He is author of *The Leadership Dance: Pathways to Extraordinary Organizational Effectiveness* (2002).

He has discovered and developed a unique approach to using the Process Enneagram, a highly effective tool for organizational transformation. It cuts to the heart of the key variables in dynamic situations enabling people to more successfully move forward through complex challenges. Knowles earned a PhD in Organic Chemistry at the University of Rochester and a BA in Chemistry at Oberlin College.

David Lipsky, PhD, Samsung Electronics America, Highland Mills, NY, USA

Lipsky is Head of Coaching, Executive Assessment and Onboarding at Samsung Electronics America. He has over 25 years of experience in building organizational and leadership capabilities that contribute to business success and personal growth. He has accomplished this by focusing on the potential and possibilities of the people and businesses he has worked with and using his extensive experience in strategic alignment, leadership development, and organizational transformation.

Lipsky has had the opportunity to work with many organizations in a variety of industries, including Sony, Unilever, United Technologies, Bank of America, Alpharma, KPMG Peat Marwick, and Merrill Lynch. Lipsky

is also an Associate Professor at the Jack Welch Management Institute. He has lectured and authored articles and book chapters on internal consulting, organizational development, and sustainability. Lipsky received his undergraduate degree from Cornell University in Human Ecology and received a PhD in Applied Psychology from Hofstra University, focusing on leadership effectiveness and success.

Sangeeta Mahurkar-Rao, PhD, ProCelerité LLC, Clifton, NJ, USA

Mahurkar-Rao is Co-founder and CEO of ProCelerité (www.proclerite.com), an enterprise focusing on business process transformation for global businesses needing to align themselves with rapidly evolving market forces.

Mahurkar-Rao's business orientation and work in organization development has deep roots in systems thinking. She sees organizations consisting of numerous interrelated systems and believes that for a company to be sustainable it is imperative to understand both the whole and the interrelationship of the parts.

Formerly, Mahurkar-Rao was Global Head of HR and OD at Persistent Systems where she focused on aligning HR with business and led a strategic realignment to a role- and competency-based organization, while driving aggressive growth in the employee base. She has been retained by global companies to successfully lead strategic value-adding initiatives including organizational restructuring, visioning, and process alignment. She has been associated with NVIDIA, Winphoria Networks, Philips Software, and Tata Consultancy Services.

Mahurkar-Rao's research has been published, and she co-edited and co-authored *Roots of Reason: Science and Technology in the Ancient World* (2002). She received her PhD in Cognitive Science from the Bulgarian Academy of Sciences, Bulgaria.

Theresa McNichol, MA, Ren Associates, Princeton, NJ, USA

Theresa McNichol is President of Ren Associates, a consulting firm whose clients include government agencies, cultural institutions, and international foundations. A former museum executive director and curator, she is an independent scholar of Chinese art and culture affiliated with the Princeton Research Forum as well as an award-winning artist. McNichol has taught at Mercer County Community College for 25 years. As the developer of *imaginement*TM, her research and arts-based science learning workshops for students and STEM faculty promote key 21st century learning skills: process oriented guided inquiry, attentional looking and exploratory writing in informal learning environments.

McNichol's publications and presentations at American, European, and Asian management conferences focus on stewardship and wise leadership. In 2012, she presented her paper "Networked Wise Management: How Self-Cultivation in the Classical Confucian Tradition Became the Way of a Global

Governance Model” at the conference Wise Management in Organizational Complexity at the China Europe International Business School, CEIBS, Shanghai, China PRC.

Her chapter, “The Art Museum as Laboratory for Re-Imagining a Sustainable Future,” is included in Volume 3 of *Advances in Appreciative Inquiry, Introduction to Positive Design and Appreciative Construction: From Sustainable Development to Sustainable Value* (2010). McNichol holds a BA in Asian Area Studies and Chinese Language from Brooklyn College and an MA in Asian Art History from New York University.

Thomas K. Robinson, Waretown, NJ, USA

Robinson literally worked with PSE&G from the ground up. His 41-year career began as a summer employee while in college as a laborer in the company’s Gas Department. After graduating with an Engineering degree from Duke University, he was hired into the company’s Management Development program. His subsequent experiences included leadership positions in the company’s Gas Distribution, Internal Auditing, HR-Management Development, Performance Excellence, Human Resource Planning, and Technical Training organizations. He championed the introduction and deployment of the company’s Lean Six Sigma Performance Improvement effort; initiated the PSE&G Benchmarking and Performance Improvement Councils and led PSE&G’s successful Health & Safety Culture Team. Prior to retiring, his final role as PSE&G’s Manager of Health & Safety involved leading a team of 14 Health & Safety professionals in assuring the safety of PSE&G’s 6,400 employees engaged in delivering safe and reliable electric and gas energy to customers across New Jersey.

Robinson served on the panel of judges for the New Jersey Governor’s Award for Performance Excellence, earned an MBA from Rutgers Graduate School of Management, and was a member of the Conference Board’s Business Performance Council. He is also an adjunct instructor at the Rutgers University Center for Management Development and Thomas Edison State University’s School of Applied Science and Technology.

Since retiring, Robinson holds leadership roles in several community, non-profit, and volunteer organizations.

William G. Russell, Principal, Transitioning to Green, Leonia, NJ, USA

Russell is a Principal with Transitioning to Green, LLC, a sustainability consulting and training company and an adjunct professor at Columbia University where he teaches Green Accounting. He has over 30 years of diverse work experience in environmental engineering; information technology tool development and implementation; managerial and financial consulting; training, coaching, and teaching. His diverse experience has enabled him to attain a holistic global sustainability-aligned perspective and deep experience advancing each segment of the triple-bottom-line. He

thrives on helping clients identify and actualize sustainability-aligned opportunities that interconnect with their core mission and objectives.

Areas of world class expertise include: sustainability metrics and performance management; sustainability accounting; financial analysis and intangible and natural capital value quantification. He is passionate about engaging with impactful enterprises and multi-stakeholder collaborations working to accelerate and scale experimental pilot project experiences, holistic sustainability-aligned corporate strategies and best practice programs, developing innovative tools, new system standards, and business and economic models. He formerly led the environmental practice of PricewaterhouseCoopers and was a founding member of initiatives such as the GHG Protocol, SRI and ESG investment tools and strategies, The Global Reporting Initiative, and The Business Alliance for the Future. He aspires to meaningfully contribute to evolving global systems and cultures that acknowledge science-based ecological conditions and promote personal and community values based on respect, equity, justice, being in service, and caring.

Daniel F. Twomey, DBA, Institute for Sustainable Enterprise, Fairleigh Dickinson University, Madison, NJ, USA

Twomey was Director, International Partnerships for the Institute for Sustainable Enterprise at Fairleigh Dickinson University (FDU), where he taught leadership and sustainability. He was previously Professor of Management at West Virginia University. He consulted for many large and small organizations and published more than 40 articles in national and international journals.

Twomey was a founder and director of four outreach organizations that link business with academia and teaching and research with practice, including co-establishing a two-day Academy of Management Workshop: The Practitioner Series. He has played a substantive role in forwarding FDU's mission of "global leader in education" by working with international universities and developing programs for both Executive MBA and undergraduate students. He codeveloped an innovative course that includes a stay in a small village in Costa Rica.

Prior to getting his doctorate, Twomey had a career in business, which he has continued as an academic, author, and consultant. Two of his recent publications include *Designed Emergence as a Path to Enterprise Sustainability, Emergence: Complexity and Organization* (2006), and *Democracy and Sustainable Enterprise* (2006). In 2012 he joined the anti-fracking movement with his wife, Rosemarie Twomey, organizing two community groups and publishing a weekly newsletter. In 2014, Twomey, now Professor Emeritus, with co-authors, submitted a paper to the International Conference of the American Society for Competitiveness. Their paper, "Fracking: Blasting the Bedrock of Business," one of 70 papers presented, was awarded "Best Paper" for the Conference.

Jeana Wirtenberg, PhD, President and CEO, Transitioning to Green; Associate Professor of Professional Practice, Rutgers University, Newark and New Brunswick, NJ, USA; Co-founder, Institute for Sustainable Enterprise, Fairleigh Dickinson University, Madison, NJ, USA

Wirtenberg helps companies and organizations make sustainability a mainstream, routine business practice. She is an expert on the leadership, organizational dynamics, and psychology required to make that happen. She is President and CEO of Transitioning to Green (www.transitioningtogreen.com). Her company develops individual and organizational capacity to make sustainability take root. She is Associate Professor of Professional Practice at Rutgers University, where she leads the Principles for Responsible Management Education (PRME) initiative, and was Co-founder of the Institute for Sustainable Enterprise at Fairleigh Dickinson University.

Her book *Building a Culture for Sustainability: People, Planet and Profits in a New Green Economy* (2014) shows how to holistically integrate sustainability throughout the culture of organizations. The book features nine case studies of companies leading the way, including Alcoa, BASF, Church & Dwight, Ingersoll Rand, Sanofi, and Wyndham Worldwide. Wirtenberg is lead editor for *The Sustainable Enterprise Fieldbook*, first and second editions (Greenleaf Publishing 2008; Routledge 2019).

Wirtenberg was HR Director for Development, Quality, and Organization Effectiveness at Public Service Enterprise Group (PSEG) where she led a variety of initiatives to transform the firm and build organizational capacity. Formerly, she held several leadership positions in AT&T Human Resources and Marketing. She started her career in the Federal government where she was a Social Science Analyst in the Office of Research at the US Commission on Civil Rights, and led the Women's Research/Social Processes team at the National Institute of Education.

She teaches Organizational Behavior in the Rutgers MBA program, Women Leading in Business, and Management Skills in the Rutgers Department of Management and Global Business. She received her Master's degree and PhD with honors in Psychology from UCLA.

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We are enormously grateful to all of our families for their support over the three years we worked on this book. They enabled us to do the work we needed to do, took care of our day-to-day needs, and made it possible for us to always keep making progress, despite untold obstacles, and health and life challenges along the way.

We are very grateful to our editors from Routledge, Rebecca Marsh and Judith Lorton, who exhibited great flexibility and continuous support throughout the process. We also want to acknowledge Penny Harper for her meticulous attention to detail and expert copy-editing to carry us all across the finish line.

Part I

Understanding reality: our context for *The Sustainable Enterprise Fieldbook*

Introduction and overview

*Jeana Wirtenberg, Linda M. Kelley, David Lipsky,
and William G. Russell*

Humanity is called to recognize the need for changes of lifestyle, production and consumption, in order to combat this warming or at least the human causes which produce or aggravate it.

(Pope Francis, 2015)

Since the first edition of *The Sustainable Enterprise Fieldbook* was published in 2008, there have been many profound changes affecting people, the planet, and business, both positive and negative. Never has there been more attention globally on climate change, and the role of business in mitigating its impacts. While this is clearly insufficient for the problems we face, we continue to believe that it is the human side of sustainability that is the missing factor. So for the past 10 years we have focused intensively on building the leadership capacities, not just in the top echelon of leaders, but at all levels, to address our most intractable problems. We realized the need for an exponential increase in education, awareness, understanding, and, most important, action to address the problems that we face. As we updated our chapters on Leadership, Strategy, Change, Employee Engagement, et al., we were struck by the overall lack of progress and how relevant our advice and concepts still are today, and feel even more of a sense of urgency that more needs to be done. This urgency becomes even more pronounced as we observe the extreme divisiveness in the United States and around the world, with people lining up to take sides to either deny the realities of evidence-based science around climate change, or on the other side to try and ameliorate its impacts or attenuate its further degradation of our planet.

While we are making awesome advances in creating and applying highly complex technologies to improve our quality of life, we are also severely damaging the essential resources that make life on Earth possible. This is the greatest human irony of all time. We cannot develop much less sustain our lives and economies without the resources provided by Earth's natural environment. Though they may seem abundant, those resources are finite. Consuming them at the rate we are doing is unsustainable by all measures.

If we are to sustain ourselves, we must make different choices, changing our consumption habits and innovating so that we work well within the boundaries of our single, shared planet. We can invent businesses and lifestyles that align with planetary realities so that we will thrive. People, planet, profits are inexorably intertwined. It's up to each of us to pay attention, lead where we can, and be thoughtful, aware contributors when others are leading. We do our best when we work together.

It will take more than inventing new technologies, though. First, we must reconnect our values to what really matters, that deep, visceral understanding of our integral connection with the essence of Earth's bounty: water, air, food-nurturing soil, energy among those resources. Writing and rereading this last sentence, it seems too obvious to even state. Yet, our actions, individually and as societies, show we have been taking these absolutely essential resources for granted, giving them no more than minimal care on our part.

How have we gotten ourselves so disconnected in a world where we have so much, and what can we do about it?

Where are we, really?

In spite of our total reliance on the natural world, we have become almost blind to it.

(Stanislaw Trzebinski, sculptural artist,
Woodstock, Cape Town, SA)

Nothing wipes away blindness to our unrelenting dependence on Nature faster than catastrophe does. Focus for a minute on the period of August–September, 2017. Two of the largest, strongest hurricanes ever recorded in the Atlantic basin hit the US mainland with little more than a week between them. Houston was deluged by Harvey that dropped almost 60 inches of rain in just the few days it was stalled over the area. Neighborhoods, oil refineries, chemical plants, all under water. Before a full assessment was made of that damage, all of coastal Florida was covered in Irma's storm surge, after that hurricane barreling through the Eastern Caribbean scouring Barbuda clean, then the knocking out of the Virgin Islands. Right behind came Maria blanketing Puerto Rico with winds that took out the island's electric power grid and water utilities. Each of these megahits left lingering devastation in its wake.

But that wasn't all. That same September, Mexico was hit by two earthquakes. The most damaging was to Mexico City where a 7.1 level earthquake turned busy city streets to rubble. And that was some of what happened in North America. In Europe, massive rainstorms flooded southern Norway, England, the Czech capital of Prague, Salzburg and Vienna in Austria, Bavaria and Saxony in Germany, the countryside surrounding the Black Sea, Croatia, Greece, Italy. Flash floods in Iran. Heavy monsoons raged floods through

India, Nepal, and Bangladesh forcing millions from their homes. Mudslides in China and the Philippines devastated communities.

Then there were the fires, some of the worst ever seen. Fifteen major wildfires raging in California alone. Over 120,000 acres burned at this writing with the fires still not under control and people praying for rain. Add to that, Oregon, Washington State, in the US. Wildfire events didn't stop at the US border though. During this same summer season of 2017, nearly 3 million acres of British Columbia burned. Brazil had its worst forest fire month ever. Hundreds of wildfires in Portugal. New South Wales and Queensland in Australia also suffered out-of-control fires. Fires in Siberia are said to be the worst in 10,000 years. Earlier in the year, wildfires rampaged through East, Central, and South Africa. Even icy Greenland is burning! Cracked from drought and burned to a crisp. Taken all together, it's overwhelming. It is not normal. It's not anyone's old normal.

Not surprisingly, the cost in lives and livelihoods from all this is gargantuan. People are not equipped to deal with multiple disasters on this scale. Each of these human disasters turns out to be a business disaster as well. Record clean up and rebuilding costs are looming over us with estimates for Hurricane Harvey as high as \$200 billion. But the ultimate loss to business is even greater than close-in immediate costs to those in the affected areas. Do you do business in any of these devastated areas? Customers there? Suppliers? Do you know people who live in one or more of these areas? Do you have relatives there? Ask them what the real costs were—financial, environmental, and social.

We have not constructed our cities and towns, nor our businesses, nor our societies to handle 200-year events coming on the heels of 200-year events. Halfway through, 2017 was already the second hottest year on record, even without the effects of an El Nino event. If only 2017 were an anomaly. It's not. It follows recent record-breaking hottest years of 2014, 2015, and 2016. This is way off the norm for recorded history. So much environmental catastrophe happening simultaneously, and often with one event compounding another, that this is no longer theoretical. All of these disasters have hit us within a short, six-week period. The conditions favoring these formerly extreme environmental events are occurring more and more often.

Positive psychology enters the mainstream of sustainability thinking

Does how you think about a challenge like sustainability impact your success in addressing it? Positive psychology tells us it does. The approach of building on what works vs. focusing on fixing problems is more likely to result in the increased collaboration needed to solve many paradoxes of sustainability. In stark juxtaposition to this dark reality, we are transfixed by a profound paradox of almost infinite positive possibilities for a new age of humanity that is

unfolding before our eyes. On the positive side, we are heartened and hopeful by the integration of principles of positive psychology into the mainstream of sustainability thinking, such as the focus on positive leadership and business practices (Cameron, 2013), the purpose economy (Hurst, 2014), the circular economy (Lacy & Rutqvist, 2015), the sharing economy (Mason, 2016), activating purpose in organizations, building meaningful work for people, the work of the Ellen MacArthur Foundation, and the movement to create a new narrative for business that encompasses a vision of a world that flourishes forever (Ehrenfeld, 2013; Laszlo & Brown, 2014). Throughout the second edition, we incorporate important advances on these principles of positive psychology and neuroscience, combined with our insights on the applicability of integrated and systems thinking to the sustainability discourse.

With cries from the Pope to CEOs of the largest corporations in the world to the UN all calling for fundamental rethinking of how we can and must create a sustainable and flourishing future for the next generation, and the next, we are convinced that it is not only possible, but that humanity is already moving inexorably towards a much needed and fundamental course correction. Yet sometimes it feels like one step forward and two steps back, in light of President Trump's dismantling of the Environmental Protection Agency (EPA), support for Arctic drilling, resurrection of the coal and fossil fuel industry, and departure from the Paris Agreement.

From a long-term change perspective, Kurt Lewin famously spoke about three stages of change—unfreezing, changing, and refreezing (Burnes, 2004). As we see it, we are somewhere between the unfreezing and change stage with regard to sustainability, with movements back and forth until we come to settle on the “new normal.” Our hope is that the positive changes we are seeing around the new narrative for business in general, and business' support for the UN Sustainable Development Goals in particular, will proliferate from large multinational corporations into small and medium-sized enterprises, as well as NGOs. We believe that as the millennial generation moves further into the mainstream of corporate leadership, and our institutions of higher education embed sustainability into their teachings (especially in the business schools and MBA levels), that cultures for sustainability will become more and more embedded. The pattern is much like in the quality movement of the 80s and 90s, and eventually sustainable business practices will become the norm and the only way to do business. **We are writing this second edition to promote this vision, and make this prognostication not only possible, but doable!**

Global sustainability trends and solutions are still emerging, but becoming clearer. Systems and rules that caused current conditions to exist are changing. We may not know if the pace of change is quick enough or if the intended results of those changes will be attained, but their change is already ongoing and unstoppable. In the midst of this uncertainty, we must manage our lives and resources and corporations today for both short- and long-term needs. Our enterprise and capital market systems, rules, and strategies

for investing and allocating financial capital are critical ones we rely upon to function. They are simultaneously experiencing innovative change and requiring sustainability-aligned strategic management.

Capitalism transformation

Capital market systems and rules establish value, facilitate global trade, and orchestrate the allocation of other interconnected natural, built, social, and human capitals. These systems directly or indirectly contributed to global risks such as asset bubbles; inflation and deflation; financial market technology infrastructure; unemployment and underemployment; and wealth and income gaps (World Economic Forum, 2017). New emergent financial system technologies are restructuring the industries' value chain and disrupting entrenched stakeholder roles.

While the trends and results appear positive, are they sufficient? People are already simultaneously anticipating more profound changes to the mental models, systems, and rules of capitalism itself. New economic models and corporate strategies such as the digital economy, the circular economy, and the sharing economy seek to decouple economic growth from material and human resource consumption constraints. The sharing economy is accelerating entirely new forms of ownership, lending, and legal contracts. As these innovations evolve they reduce the dependence on traditional capitalism to determine values, job skills, market prices, and resource allocations.

The great technological advance of the early 21st century consists not only of new objects and processes, but of old ones made intelligent. The knowledge content of products is becoming more valuable than the physical things that are used to produce them. But it is a value measured as usefulness, not exchange or asset value.

In his book, *The Big Pivot*, Andrew Winston (2014) provides a strategic framework for a resilient company. The framework anticipates resources becoming more scarce (and expensive) and external ecosystem-service values (i.e., climate change) being financially quantified and more internalized. Companies will need to radically collaborate with competitors and other stakeholders, and engage with and lobby for new government policies and rules. These next sustainability-aligned capital market transformation and value creation trends are already being successfully applied. Executives and investors must now reflect on the core purpose of their businesses, change their corporate visions, and implement new, emergent systems and rules to direct and accelerate their progress towards the sustainable future they are creating.

Rising investor demand for information on sustainability has spurred a flood of new research, both in the academic community and in the major brokerages that have formed dedicated teams assessing how companies are affected by everything from climate change and social pressures in emerging markets to governance records.

“Business case” for a sustainable enterprise

As much as businesses now recognize the “business case” for paying attention to sustainability, and even see it as a burning platform, we see on the horizon a tectonic shift taking place in corporations around the world. Today, many businesses are responding to the call to develop sustainability-aligned strategies because of their purpose, values, sense of corporate social responsibility, and their need to be and be seen as good corporate citizens. According to every executive survey from 2010 to 2017, sustainability is now “a key strategic priority” for most CEOs. Leading firms are seeing that an integrated “triple bottom line” (i.e., people, planet, profits) that balances attention to employees, society, and the environment with financial outcomes is critical not only to the world’s sustainability, but also to their own long-term viability in the global marketplace.

Companies that want to succeed and thrive in the future are increasingly being encouraged to find ways to simultaneously meet both their own strategic needs and those of society (Porter & Kramer, 2011). More than ever before, companies are being asked to emphasize a broader and more balanced array of outcomes such as those characterized by the “triple bottom line” of people, planet, and profits (and to ensure sustainability is deeply embedded and not just bolted on) (Laszlo & Zhexembayeva, 2011; Wirtenberg, 2014). In the 21st century, rather than focusing singularly or even primarily on the “financial bottom line” and the financial assets they possess, the most sustainable companies are looking at themselves and their future through the lens of the “six capitals model” of natural, human, social, manufactured, intellectual, and financial capital. As discussed in Chapter 3, companies are fundamentally rethinking their strategies incorporating risks and opportunities emerging from the UN’s Sustainable Development Goals, and new business models disrupting stagnant industries like energy and retail. Importantly, issues of climate change mitigation and adaptation, resource scarcity, rising consumer expectations, and radical transparency are all issues driving the new realities of business in the 21st century.

At the same time, evidence continues to mount demonstrating that corporate social-environmental performance is strongly associated with financial and marketplace success. For example, a study by Accenture/UN Global Compact (2013) showed that while the corporate sustainability movement has clearly been broadening and producing a deeper awareness and commitment all over the world, many business leaders are quite frustrated with the pace of change and the scale of their impact. There is clearly a “knowing-doing” gap at play which we address throughout this book.

On a positive note, a major potential advance which can help close this gap stems from the finding that sustainability can be seen as a key driver of innovation. In a recent Deloitte study, Aronson (2013) found that sustainability

leaders are more than 400% more likely to be considered innovation leaders. Why? Because

Sustainability can provide a different “lens” for thinking: it helps companies to approach situations differently ... Thinking differently can unlock companies’ innovative potential—they may see situations from a different point of view, they may re-examine their perspective of what’s important, and they can tap into new ideas.

(Aronson, 2013, p. 3)

And we see more and more evidence on almost a daily basis that the professional investment community, corporate executives, and directors appear to be increasingly focused on the degree to which firms are managed sustainably (Wirttenberg, 2014).

As an example, take Coca-Cola. What is the most important ingredient in Coca-Cola’s success? Water. The syrup is what gives the product its competitive advantage, but without water Coca-Cola could not supply the world with its products. When the company became aware of the global challenge facing potable water, it co-founded the Global Water Challenge to address the problem. Sustainability makes business sense.

So why do we need *The Sustainable Enterprise Fieldbook*? And why now? Although the desired outcome of sustainability is becoming increasingly clear, the process by which one can best develop and implement sustainability is considerably less so. Our book is designed to help address both the what (what is a sustainability-aligned strategy for a company or organization?) and the how of sustainable enterprise (how do we go about building a sustainable enterprise?).

Although we use the term enterprise throughout this book (a term that is usually associated with the for-profit business sector), we firmly believe that the disciplines, case studies, tools, and references presented throughout our *Fieldbook* are applicable to organizations within the government, education, nonprofit, and nongovernmental organization (NGO) sectors as well. Furthermore, wherever possible we intentionally include examples of successful public–private partnerships, collaborative initiatives operating across multiple stakeholders and institutions, and organizations working in the “in-between space” to build sustainable enterprises. We believe these cross-sector, collaborative partnerships may offer the greatest hope for solving many of the globe’s most intractable problems.

Humanity at a crossroads

We believe humanity is at the most profoundly critical crossroads in history, and the only acceptable solution is to move to a “human centric” world based on a caring and networked economy. We need to find a new balance between “me” and “we.” We always need to remember the oxygen mask instructions the flight attendants give passengers when the plane is just starting. Put your

own mask on first! You can't help anyone else if you don't take care of your own health and wellbeing.

We are especially drawn to the notion called “Ubuntu,” a Nguni Bantu word, which roughly translates to: “we are because you are, and since you are, definitely I am.” Loosely translated as “My humanity depends on your humanity; your humanity depends on my humanity.” To be human is to affirm one's humanity by recognizing the humanity of others and, on that basis, establish respectful human relations with them. Desmond Tutu said: “You can't be human all by yourself, and when you have this quality Ubuntu you are known for your generosity.”

As we realize the importance and potential of this interdependence of humanity, it can help us accelerate our progress towards thriving. We can move from the individual isolation of win-lose thinking to the possibilities of collaborating with the diversity required to innovate new solutions.

Humans are by nature social beings. Our obsession with “individual” would be an anathema to our ancestors. The primacy of individual over the public good is a very recent development in human history. We have yet to arrive at an optimal dynamic balance.

People are nothing if not inventive. From small band beginnings, people have spread around the globe inventing cultures and doing business along the way. This overwhelming success, though, has put humanity at a crossroads where sustainability now vies with unsustainability, and frankly the outcome is uncertain. In this *Fieldbook* we endeavor to lay out some essential areas where we must generate and grow sustainability's foundations.

Conscious capitalism

How should a person be if he or she has values aligned with sustainability? While making money is essential for the vitality and sustainability of a business, it is not the only or even the most important reason a business exists (Stout, 2012). Conscious businesses focus on their purpose beyond profit. We all need meaning and purpose in our lives. Purpose activates us and motivates us. It moves us to get up in the morning, sustains us when times get tough, and serves as a guiding star when we stray off course. Conscious businesses provide us with this sense of meaning and purpose. By focusing on its deeper purpose, a conscious business inspires, engages, and energizes its stakeholders, employees, customers, and others trust and even love companies that have an inspiring purpose.

Purpose of The Sustainable Enterprise Fieldbook

We like to think about life and sustainable development as a journey. For this moment and as a helpful metaphor to convey our messages, we imagine the journey to be traveling across a bridge. How we are currently being present

for this passing moment in time is the cumulative collection of universal material, energy, intellectual and spiritual stocks and flows from all of our life experiences and actions so far. We live day to day and progress step by step. Each day we are alive our spirit, our living self-system, has sustained itself. We are fortunate, or lucky, or blessed with the opportunity to live another day. We get to decide again what we will do, how we choose to spend our time. Each new day we have journeyed another step along the bridge. The world has changed and we have changed. We are all interconnected and therefore are never traveling alone. We are individually powerful and weak at the same time. We are learning, having more experiences and impacts. Each day we reassess our context and decide how next to spend our precious and unknown remaining lifetime. How much more might we accomplish as we build another bridge increment? We are all some place along this bridge between the past and the future. The future has not yet happened and so for as long as we are alive we continue to control and influence some small aspect of some future outcomes. With greater collective wisdom, we can sufficiently transform our behavior and mental models, evolve and change for the better. With each renewed vision for a thriving future that we want to create, we set new sustainability-aligned goals and pivot to resiliently guide us onward.

The purpose of the *Fieldbook* is to help forge a path to a better world and a more sustainable, flourishing, and thriving future by supporting employees, managers, and leaders at every level and in every function, sector, and industry in three key ways:

- increasing their understanding and awareness of the meaning of sustainability on a conceptual, practical, and personal level;
- energizing and expanding their commitment to building sustainable enterprises that can contribute to enhancing the sustainability of the world and its ecosystems for generations to come;
- providing readers with the tools and techniques needed to individually and collectively take appropriate actions that will improve their personal and enterprise sustainability performance in the short and long term.

Missing ingredients and *The Sustainable Enterprise Fieldbook*

The human environment and the natural environment deteriorate together: we cannot adequately combat environmental degradation unless we attend to causes related to human and social degradation.

(Pope Francis, 2015)

The Sustainable Enterprise Fieldbook is designed to align with an emergent framework of best-practice enterprise qualities. In it, we pay particular attention to those areas with gaps between current and future practices as identified

in a global sustainability survey of business leaders and managers (American Management Association [AMA], 2007), and that have been reinforced by many subsequent surveys.



This *Fieldbook* is unique in at least six respects:

1. We focus on the critical role that human capital (i.e., people) needs to play in the transformational journey to sustainable enterprise. We believe that this is the missing ingredient in transforming rhetoric into action, and we are committed to helping pave the way for people to take the actions needed to, quite literally, save the world.
2. It is based on a stream of original research, both qualitative and quantitative, focused on the qualities of a sustainable enterprise and state-of-the-art best practices. This research is summarized later in this chapter and interspersed throughout the book with specific illustrative examples from businesses and other organizations.
3. It offers concrete and practical ways to close the significant gaps that our and more recent worldwide studies revealed in the role that managers in every function need to play to build a sustainable enterprise. For example, we focus heavily on the “knowing-doing” gap, i.e., the significant gap between what managers know needs to be done, and what they and their organizations are actually doing about these sustainability challenges in their day-to-day practices.
4. We engage with you, our readers, by sharing the experiences some of our authors have had working with businesses, nonprofits, and educational institutions to design and implement elements of an organizational model founded on principles of sustainability, integrity, inclusivity, mutuality, and self-organizing leadership.
5. By offering a complementary online *Living Fieldbook* (see below) we strive to model sustainable principles and practices.
6. We see the entire journey as a form of action research and action learning, as we seek to continuously learn and improve on all elements of our current understanding and the future iterative learning we will all experience during the global journey to sustainability.

The Sustainable Enterprise Fieldbook and its innovative *Living Fieldbook* and online community support services offer a missing ingredient in the elements we think must come together to create a sustainable world.

Using *The Sustainable Enterprise Fieldbook*

The Sustainable Enterprise Fieldbook is designed so that the reader may quickly and easily reference any individual enterprise quality and find resources, case studies, tools, and related materials that can be used to help transform any enterprise from its current state to a more sustainable future state. Although

all chapters cover distinctly different sustainable enterprise qualities, a consistent set of content categories are highlighted by icons throughout the *Fieldbook* to provide users with a quick visual guide and to enhance the *Fieldbook*'s utility.

Activities for awareness and understanding (A)



Throughout the chapters we introduce a number of activities, frameworks, thought questions, and the like. All of these are intended to increase awareness and understanding and are denoted by an **A**. Wherever an **A** appears, we suggest that professors and/or managers lead a simple activity, such as having their group read and discuss the associated text (essay, framework, and the like). In some cases, we supplement the **A** with an **L** for *Living Fieldbook* (see below). The **L** lets readers know they will find more detailed thought questions, discussion guides, and specific exercises aimed at further increasing awareness and understanding around that activity on the *Living Fieldbook*.

Case examples (C)



The *Sustainable Enterprise Fieldbook* uses case examples throughout the chapters as an effective way to make our messages more real to *Fieldbook* users. A **C** highlights case studies.

Tools (T)



The *Sustainable Enterprise Fieldbook* provides sample tools that lead to action. These were strategically selected by each chapter's authors as we discovered and used them during our work or learned about how others were using them by interviewing practitioners and identifying case examples. A **T** highlights tools.

Collectively we hope the Activities for awareness and understanding (**A**), Cases (**C**), and Tools (**T**) help inspire people to ACT.

Living Fieldbook collaborative workspace



Our collective community of authors recognize the constraints imposed by a physical book with hard page limits, deadlines, and production costs that make it impossible in one physical book to keep up with the rapid pace of learning and change related to sustainable enterprise practices. We hope to accommodate these limitations by supplementing the physical book content with an online Sustainable Enterprise Living Fieldbook workspace. The workspace is referred to throughout this book and can be freely accessed at <https://TheSustainableEnterpriseFieldbook.com>.

Since the beginning of our discussions, we determined that there was an abundance of highly valuable reference materials, tools, and case studies that individual team members were aware of and wanted to share. This shared knowledge became so expansive that we began to explore ways to introduce the best themes of these works within our book and offer readers an efficient way to identify and access our references and learn more deeply about any selected topic. We also recognized that, as standards and best practices rapidly evolve, our *Living Fieldbook* would provide a way to keep our insights current and even support open discussions and feedback forums where different opinions could be openly progressed, and completely unanticipated insights and solutions could naturally emerge.

We hope that the information and activities presented in the book, and the *Living Fieldbook*, will empower readers to effect positive change in their organizations, schools, and communities. Our aim is to build a socially, ecologically, and economically flourishing world, together. Toward this aim, the purpose of the *Living Fieldbook* is to provide a valuable and extensive supplemental online resource that expands the breadth and depth of material presented in *The Sustainable Enterprise Fieldbook*. The material you will find here has been carefully selected by the contributing authors of the book.

As mentioned above, throughout the book are icons for **Activities**, **Cases**, and **Tools**, with an “**L**” indicating that additional corresponding material may be found in this online space. As referenced in the book, here in the *Living Fieldbook* you will find that **Activities**, **Cases**, and **Tools**—as well as additional resources such as links to studies and videos—are listed by chapter.

Also featured in the *Living Fieldbook* are Learning Guide activities that enable professors, instructors, and managers to readily facilitate classroom exercises and lunch and learn activities. We invite you to explore and incorporate these materials and activities into your work, within your organizations, or in higher education. We welcome questions, comments, discussion, and encourage you to share your own ideas, experience, and research with the Organization Development Collaborative for a Flourishing World (ODCFW) on LinkedIn.

Context: Where are we now in the journey towards a sustainable world?

This section provides a window into how sustainable enterprise context and behaviors have changed from the first edition of the *Fieldbook* published in 2007 through the present time and including a vision of next behaviors through 2030, the timespan set by the United Nations to accomplish the Sustainable Development Goals.

2007 scenario predictions and 2017 result reflections

Writing this second edition of *The Sustainable Enterprise Fieldbook* presented a valuable opportunity to deeply reflect on what has happened over the past decade since our original publication. The first edition included three scenario predictions for the future. We shared at that time and repeat now that scenarios are fictional stories about possible futures. They are not intended to predict the future. Rather, they are intended to help readers challenge their own hidden assumptions about how the future may turn out. Some scenarios are based on ideas and trends that already exist. Newer scenario tools have expanded to include versions that set future goals and force people to imagine new paths and identify innovation needs and leverage points to accomplish those goals. Using today's mindsets and/or technology constraints some goals seem impossible. Scenarios that work back from a vision and goals for the future we want to create can serve to reveal new possibilities and previously unknown solution perspectives.

As predicted, this past decade's progress has been a combination of the proposed scenarios plus events and trends both positive and negative that were not foreseen at that time. The three 2007–2017 scenarios and a few reflections about each are:

1. **Things fall apart:** *Businesses see sustainability as a buzzword. Most businesses just want to survive in an increasingly anarchic world.*

Reflections: Predictable, avoidable environmental trends including increasing greenhouse gas emissions and climate change; plastics waste pollution, coral reef bleaching, and overfishing of the oceans; and widening of the gap between the world's richest and poorest people continued to worsen. Current anti-globalization and escalating risks of military conflicts in Korea or the South China Sea could all be perceived as the fruition of things falling apart.

Box 0.1 If only ... sooner

How do we get people's attention who refuse to accept and act on critical areas of sustainability? One way is to start with a story:

Mother passed at 3pm on a cold, overcast wintery afternoon. Sitting bedside for 25 hours after taking her off life support, my sisters and brothers reminisced about our happiest and saddest memories mixed in with many "if only, sooner regrets." If only she had stopped smoking, checked for cancer, and saw that specialist sooner, we may have had her with us still. If the Mother in this story was our Mother Earth, how can we save her before going on life support? Sooner is now, we must change and move to action.

2. **Muddling toward sustainability:** *In 2017, sustainability is, at best, a mixed bag and, at worst, an utter mess. Countries keep trying to create global agreements on everything: fisheries, greenhouse gases, water conservation, pandemics, the reduction of global poverty, and so on. But the agreements are usually based on unchallenging consensus targets that, even when missed, are seldom punished by the larger community.*

Reflections: Until recently, this path to sustainability was looking spot on. Now, however, the resiliency feedback levels identified to avoid various ecosystem and social crisis have narrowed. Future progress will have less room for muddling toward sustainability, and needs to rapidly accelerate.

3. **A global sustainability culture:** *The most hopeful scenario proposed for 2017 suggested a global sustainability culture might have taken root. Tipping point signals causing the cultural awakening would come from alarming scientific findings, changes in climate patterns, geopolitical conflicts, global media networks, and innovations in the marketplace including the success of “green” businesses.*

Reflections: Feedback signals from each of the tipping point elements are amplifying attention that may still trigger a global mindset change and cultural shift. The rapid uptake by both countries and companies embracing the United Nations 2030 agenda and the Sustainable Development Goals gives us reasons to continue being hopeful for a thriving future.

Human and sustainability systems context: past, present, and future

Since we first published this book 10 years ago we have learned so much from our work in implementing the original concepts and tools. Reflecting on this learning helped us to adjust our vision, analytical models, and scenario stories, which we have included in this new edition. We see humans as the critical resource and ultimate purpose that sustainable enterprises both depend upon to operate and whose ultimate purposes they serve. We applied systems thinking (see Chapter 2) and input output modeling concepts to supplement the scenario stories and add richer context details to expand our openness to new ideas (mental models), guide our new behaviors (change management), shift our expectations (strategic goals) and feedback signals (metrics) as we simultaneously build and journey across our sustainability bridge into the future. In the table below we highlighted some of the key changes we have seen since publishing our first edition in 2007, second edition in 2019, and a look into the future in 2030 and beyond. In Table 0.1 below you will see “+” indicating positive contributors to sustainability progress and “–” for detractors.

The future looks bright, as we change our awareness, thinking, and collective action. We believe we will continue to make great strides in awareness and our thinking will continue to evolve using integrated thinking.

Table 0.1 Past, present, and future sustainability snapshot

	Past as of 2007	Present as of 2018	Future (2030+)
Population	6.6 billion^a	7.6 billion	8.6 billion
Gross world production (GWP)	US\$69.3 trillion	US\$107.5 trillion as of 2014 US\$78.28 trillion (nominal terms)	US\$84.4 trillion
Financial Context	<ul style="list-style-type: none"> + Economic systems were market-based and aligned with natural capital supplies and distribution efficiencies – 2007–2008 subprime mortgage crisis, feedback signals wrong, delayed, or missing – Americans lose quarter of their collective net worth^b – Lehman Brothers' collapse 	<ul style="list-style-type: none"> – Wider income gaps, continuing to increase + Enterprise income increasing – Employee wages decreasing 	<ul style="list-style-type: none"> + \$6.6 trillion from productivity, businesses process automation, AI labor-force augmentation + \$9.1 trillion from consumption side-effects, personalized and higher-quality goods (PWC estimate^c)
Human context	<ul style="list-style-type: none"> + Sustainability enlightened thought leaders including: Buckminster Fuller, Donella Meadows, and Ray Anderson + Original Enterprise Sustainability Action Team who collaborated to produce the original edition of this <i>Sustainable Enterprise Fieldbook</i> 	<ul style="list-style-type: none"> + New leaders building upon and scaling past thought leaders' work with new goals, better technology, and mindfulness – Wider income and knowledge gaps, privileged control reduces trust 	<ul style="list-style-type: none"> + Historic generational shift in wealth and power from baby boomers to their younger children, influencing mindsets, goals, control of wealth, relationships to technology platforms, and sense of place or being in the universe +/- Urbanization and migration of talent +/- AI labor-force changing landscape of work
Triple-bottom-line systems context	<ul style="list-style-type: none"> + Systems thinking and triple-bottom-line frameworks evolving + Social capital was evolving with the advent of the Internet, social media, and globalization 	<ul style="list-style-type: none"> + Growing understanding of systems thinking. A triple bottom line or three major aggregate systems of economic, social, and the environment are acknowledged and seen as integrated, but with acceptable tradeoffs between systems 	<ul style="list-style-type: none"> + Advanced understanding of fully integrated systems and feedback loop dynamics are evolving + Multi-capital inputs evolving to measure system stocks and flows across system scales

(continued)