THE
Professional Practice
SERIES

Eduardo Salas Scott I. Tannenbaum
Debra Cohen Gary Latham
EDITORS

Developing and Enhancing Teamwork in Organizations

Evidence-Based Best Practices and Guidelines

A Publication of the
Society for Industrial and
Organizational Psychology

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Developing and Enhancing Teamwork in Organizations

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4. Document and demonstrate best industrial and organizational-based practices
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Eduardo Salas

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Gary Latham

Editors

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Foreword

This latest volume in the SIOP Professional Practice Series was sparked and inspired by a Leading Edge Conference sponsored by the Society for Industrial and Organizational Psychology held in the fall of 2010. That conference was designed to bring together leading-edge practitioners and academics to exchange views and knowledge about effective teams and help lead to better practice in that area.

Gary Latham chaired that Leading Edge Conference, in his final role as president of SIOP. The conference theme he chose was work teams. The co-chairs of the conference were Scott Tannenbaum, who brought together leading scientists on work teams, and Debra Cohen, who brought together leading practitioners. Eduardo Salas, who was SIOP president-elect, represents both aspects, as he is a scientist-practitioner on work teams and hence was selected as the primary editor of this book.

Using the best results from the conference, Eduardo Salas and his colleagues, who were all involved in key roles for that conference, employed the presentations and concepts as a framework to bring the contents of this volume to us. After reflecting on the conference's presentations and experience, all of the content in this book was updated and new material was added beyond that covered in the conference itself.

As one can see in the table of contents, the settings and outcomes of team performance described in this book cover a wide range of activities and industries. We learn about teamwork in the NASA organization supporting astronauts, superior performance in football, and also in the military and industry. We are also treated to some fascinating chapters concerning health care organizations and their delivery of vital services.

The range of contributors to this volume includes about one-quarter from outside of the United States, reflecting the global

importance of this topic and the wealth of experience available around the world. The editors are to be commended for honoring and sharing this broad set of viewpoints.

The wide range of contributors' work settings and experiences also adds to the value of this book. The contributors include internal and external consultants, highly regarded academics and professors, as well as the full-time staff of many of these organizations.

It is fascinating to read about the range of challenges that face teams in today's organizations. Many are made up of a diverse set of team members, varying in experience, education and training, and other personal characteristics. Many teams include people who are not in the same room together, are geographically dispersed, and often connected only by electronic media. Welcome to the new world of work!

The problems and settings in which we see teams playing a vital part include several high-risk enterprises, such as military and high-technology units. Others require complex problem-solving skills in environments of great uncertainty and political sensitivity. In such situations, no single person can accomplish the work required. Only teams will be able to do what needs to be done, but only effective teams will suffice. Fortunately, this book helps us understand what must be done to make such teams effective.

It is particularly refreshing to see this volume focus on what we know will work to develop and enhance team performance in organizations. The contributors are dedicated and consistent in offering evidence-based practices. In other words, they use research to support the many specifics offered here for good team performance and ways to enhance teamwork. The presentations in this volume are extremely helpful to the serious researcher or practitioner attempting to improve team performance.

Our field owes thanks to the editors of this book for bringing it all together. Debra Cohen, Gary Latham, Eduardo Salas, and Scott Tannenbaum are well-respected and esteemed scholars and practitioners on the topic of effective teams. This volume demonstrates why they are so highly regarded. Their efforts and those of the chapter contributors certainly enrich our understanding of effective work teams.

Rye, New York
January 1, 2013

Allen I. Kraut, Series Editor

The Editors

Eduardo Salas, Ph.D., is the Pegasus Professor of Psychology and university Trustee Chair at the University of Central Florida, where he also holds an appointment as program director for the Human Systems Integration Research Department at the Institute for Simulation and Training. Dr. Salas has co-authored more than 450 journal articles and book chapters and has co-edited twenty-five books. He received his Ph.D. in industrial and organizational psychology from Old Dominion University in 1984.

Scott I. Tannenbaum, Ph.D., is president of the Group for Organizational Effectiveness (gOE), an Albany, New York–based consulting and research firm he co-founded in 1987. Under his leadership, gOE has provided advice, tools, and training to more than four hundred organizations, including more than thirty Fortune 100 companies. He has worked with and supported a wide array of teams, including medical, drilling, aviation, sales, banking, combat, and leadership teams. Dr. Tannenbaum has written more than sixty publications and given over one hundred professional presentations. He has authored books on knowledge management and human resource technologies, reviewed for twenty professional journals, and served as the Principal Investigator on numerous research contracts and grants.

Debra J. Cohen, Ph.D., SPHR, is senior vice president, Knowledge Development, for the Society for Human Resource Management (SHRM) and is responsible for the Society's Knowledge Development Division, which includes the SHRM Knowledge Center (including the Society Library), the Research Department, Academic Initiatives, HR Standards, and Thought Leadership. Dr. Cohen joined SHRM in May of 2000 as the director of Research. Prior to joining SHRM, Dr. Cohen spent fifteen years as an

academician teaching HRM at George Washington University and George Mason University. Dr. Cohen has published more than forty articles and book chapters and has been published in a variety of journals, including *Journal of Management*, *Academy of Management Journal*, *Personnel Psychology*, *Human Resource Management*, and many others. Dr. Cohen received her Ph.D. in management and human resources in 1987 and her master's degree in labor and human resources in 1982, both from The Ohio State University. She received her bachelor of science in communications from Ohio University. She is a frequent presenter at national, international, and regional conferences and has spoken to a wide variety of audiences. Prior to her academic career, she was a practicing human resources manager in training and development.

Gary Latham, Ph.D., is the Secretary of State Professor of Organizational Effectiveness in the Rotman School of Management. He is a past president of the Canadian Psychological Association and the Society for Industrial-Organizational Psychology, and President Elect of the Work and Organizational Psychological Division I of the International Association of Applied Psychological. In addition, he has been awarded the status of Fellow in the Academy of Management, American Psychological Association, Association for Psychological Science, Canadian Psychological Association, International Association of Applied Psychology, Society for Industrial-Organizational Psychology, and the Royal Society of Canada. Dr. Latham has served on the board of governors for the Center for Creative Leadership and currently serves on the board of directors for the Society for Human Resource Management.

The Contributors

Essay 1

Michael J. Castellana, CPA, president and CEO of SEFCU, leads the largest credit union in the Capital Region and the seventh largest in the State of New York. Castellana joined SEFCU more than twenty-three years ago as a member of the executive management team and during his tenure has seen the credit union grow both geographically and in overall size. Castellana directs all functional areas of the credit union and is responsible for its business planning and asset management. In addition, he serves as chairman of the SEFCU Foundation, a nonprofit affiliation Castellana formed to pool the time, talent, and financial resources of SEFCU staff in support of children's causes.

Outside of SEFCU, Castellana is also an active leader in the community. He is chairman of the board of directors of the Capitalize Albany Corporation and serves on the boards of the American Cancer Society's HopeClub, the University at Albany Foundation and Tech Valley Connect. He also sits on the advisory boards of Big Brothers/Big Sisters, Little Sisters of the Poor, St. Anne Institute, the University at Albany MBA Advisory Council, the Dean's Council of the Lally School of Management of RPI, the President's Advisory Council of Hudson Valley Community College, and the Federal Reserve Bank of New York's Community Depository Institutions Advisory Council of which he was recently named chair. Castellana is also a member of the AICPA and the NYSCPA.

Essay 2

Casey Haskins served twenty-nine years as an Army officer, retiring in 2011 as a colonel. In his Army career, he commanded units

from platoon through brigade and served in a variety of staff positions, in the United States and overseas. He earned a reputation as one of the Army's most innovative trainers, as well as for a distinctly new approach to planning and leading organizations, which has since been adopted by a number of organizations around the world and continues to influence the Army as a whole. At the time of his 2010 presentation to the SIOP Leading Edge Consortium, he was the director of military instruction at West Point. Since retiring from the Army, Casey has worked as an independent consultant and trainer and has started his own business, Deep Insights LLC.

Essay 3

Peter J. Pronovost, MD, Ph.D., FCCM, is a practicing anesthesiologist and critical care physician and a professor in the departments of Anesthesiology and Critical Care Medicine, Surgery, and Health Policy and Management who is dedicated to finding ways to make hospitals and health care safer for patients. He is senior vice president for patient safety and quality and Director of the Armstrong Institute for Patient Safety and Quality, Johns Hopkins Medicine.

Dr. Pronovost developed a scientifically proven method for reducing the deadly infections associated with central line catheters. His simple but effective checklist protocol virtually eliminated these infections, saving 1,500 lives and $100 million annually across the State of Michigan. This infection prevention program is being implemented across the United States and in several countries around the globe.

Dr. Pronovost regularly addresses Congress on the importance of patient safety, prompting a report by the U.S. House of Representatives' Committee on Oversight and Government Reform strongly endorsing the ICU infection prevention program. He has chronicled his work helping improve patient safety in his new book, *Safe Patients, Smart Hospitals: How One Doctor's Checklist Can Help Us Change Health Care from the Inside Out.* He has also published more than four hundred articles related to patient outcomes, safety, and the measurement and evaluation of safety

efforts. He serves in an advisory capacity to the World Health Organizations' World Alliance for Patient Safety.

He has won many awards, including the coveted MacArthur Fellowship in 2008, and was named by *Time* magazine as one of the world's one hundred "most influential people."

Essay 4

Victor V. Buzachero is corporate senior vice president for innovation, human resources and performance management, Scripps Health. He joined Scripps Health in September 2001 and has since led Scripps Health to national recognition as a top employer by AARP the past seven years, *Working Mother* magazine for the past five years, and *Fortune* magazine's Top 100 Employers in 2008, 2009, 2010, and 2011. He has led several new and successful initiatives, including a comprehensive employee wellness program, implementing an annual management cycle that integrates strategic planning, capital planning, operations planning, performance management, and talent management, as well as decertifying the California Nurses Association to maintain the only non-union health system in California. Buzachero's leadership has helped grow Scripps Health to a $2.4 billion integrated delivery health system. Prior to coming to Scripps Health, he held top executive level positions at organizations such as Providence Health System, Banner Health System, Presbyterian Health System (Texas Health Resources), and Baptist Health System. During his tenure at these organizations, Buzachero developed and successfully implemented programs on leadership development, service excellence, reduction in employee turnover, improved employee satisfaction, as well as an e-health strategy. Additionally, he served as vice president of marketing (hospital acquisitions) for Quorum Health and was co-owner and principal of a national labor relations and executive compensation consultancy. In 1999 Franklin Covey honored Buzachero with the "Organization of Excellence" award for his prominent efforts in organization development and effectiveness and in 2011 he was honored by *HR Executive* magazine as a top HR executive for the year. He is frequently sought out to speak at the national level on ROI in health care and work

force initiatives and labor relations among many other topics. He is the current chairman of the American Hospital Association Solutions Board, in addition to serving on other boards.

Essay 5

George O'Leary has been the head football coach at the University of Central Florida since 2004. Under O'Leary, UCF has made three appearances in conference championship games and won conference titles in 2007 and 2010. UCF has also gone to four bowl games with O'Leary at the helm. O'Leary has been voted conference coach of the year three times, and was *SportsIllustrated.*com's national coach of the year in 2005.

O'Leary is also known for his success while the head coach of Georgia Tech from 1994 to 2001. Georgia Tech went to five straight bowl games, beat their arch-rival Georgia three years in a row, and won the conference title in 1998. While the head coach at Georgia Tech, O'Leary was named conference coach of the year twice and Bobby Dodd national coach of the year in 2000.

O'Leary began his career in 1968 with a very successful high school career then stints as defensive line coach at Syracuse, defensive coordinator at Georgia Tech, defensive line coach for the San Diego Chargers, defensive line coach for the Minnesota Vikings, and defensive coordinator for the Vikings. O'Leary attended the University of New Hampshire and earned his degree in physical education.

Essay 6

Astronaut Daniel W. Tani was selected as an astronaut candidate by NASA in April 1996 and reported to the Johnson Space Center in August 1996. Having completed two years of training and evaluation, he qualified for flight assignment as a mission specialist in 1998. He held technical duties in the Astronaut Office Computer Support Branch and EVA Branch and has served as a crew support astronaut (CSA) for Expedition 4. Tani flew on STS-108 in 2001 and has logged more than eleven days in space, including over four EVA hours in one space walk. In 2002, he was a crewmember on the Aquarius undersea research habitat for nine days as part

of the NEEMO-2 mission (NASA Extreme Environment Mission Operations). Tani then trained and qualified as the backup flight engineer for Expedition 11, which launched aboard the Soyuz TMA-6 in April 2005. A veteran of two spaceflights, Tani has logged more than 131 days in space and thirty-nine hours and eleven minutes in six EVAs.

After Tani received his bachelor's degree from MIT, he worked at Hughes Aircraft Corporation in El Segundo, California, as a design engineer in the Space and Communications group. In 1986, he returned to MIT and received his master's degree in mechanical engineering in 1988, specializing in human factors and group decision making. After graduation, Tani worked for Bolt Beranek and Newman in Cambridge, Massachusetts, in the experimental psychology department. In 1988, Tani joined Orbital Sciences Corporation (OSC) in Dulles, Virginia, initially as a senior structures engineer and then as the mission operations manager for the Transfer Orbit Stage (TOS). In that role, he served as the TOS flight operations lead, working with NASA/JSC mission control in support of the deployment of the ACTS/TOS payload during the STS-51 mission in September 1993. Tani then moved to the Pegasus program at OSC as the launch operations manager. In that capacity, he served as lead for the development of procedures and constraints for the launching of the air-launched Pegasus unmanned rocket. Tani also was responsible for defining, training, and leading the team of engineers who worked in the launch and control room.

Chapter 1

Michael Beer is Cahners-Rabb Professor of Business Administration, Emeritus, at the Harvard Business School and co-founder and chairman of TruePoint, a management consultancy whose mission is to help senior teams transform their organizations into high-commitment, high-performance enterprises. He is a well-known authority in the areas of organization effectiveness, organization change, and human resource management. Beer is the author of eleven books, including *High Commitment, High Performance* (2009) and *Higher Ambition* (2011). He is the recipient of numerous professional and academic honors, among them the

Academy of Management's Scholar-Practitioner Award and the Society of Human Resource Management's Michael C. Losey Research Award.

Chapter 2

Bill Curtis, Ph.D., received his M.A. in psychology from the University of Texas and his Ph.D. in organizational psychology and statistics from Texas Christian University in 1975. He taught behavioral statistics at the University of Washington, where he participated in research on leadership, sports psychology, and programmer selection. During 1977 he was a staff psychologist at Weyerhaeuser, where he worked on organizational effectiveness programs and co-developed training for a performance appraisal system. In 1978 he joined GE's Space Division, where he led experimental research on software development methods and validated the predictive value of software metrics. Later at the ITT Programming Technology Center he developed a global software productivity and quality measurement system. He joined MCC, the American fifth-generation computer research consortium, in 1983 and led research on advanced user interface technologies and the software design process. He joined the Software Engineering Institute at Carnegie Mellon University in 1991 as director of the Software Process Program and led the project that produced the "capability maturity model" (CMM), which has become the global standard for evaluating the capability of software development organizations. He later developed the People CMM and business process maturity model. He co-founded TeraQuest, which became the global leader in CMM-based consulting services and was acquired by Borland in 2005. He is currently a senior vice president and chief scientist of CAST Software, which has developed a technology for measuring the structural quality of software systems. He is also the director of the Consortium for IT Software Quality, which is developing global standards for measuring software size and structural quality. He has published four books and more than 150 articles. In 2007 he was elected a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) for his contributions to software process improvement, software measurement, and the psychology of programming.

Chapter 3

Kazem Rassouli, Ph.D., earned his master's and Ph.D. degrees in chemical engineering from the University of London. He began his career as a process engineer and soon rose to the rank of management at Iran-Japan Petrochemical Complex. In 1986, Dr. Rassouli became the director of Esfahan Nuclear Technology Center, about which he has written in this book. In 1998, International Atomic Energy Agency (IAEA-Vienna) invited him to share his latter experience in a project management guide-book and also evaluate the effectiveness of IAEA in planning and execution of $70M projects worldwide. Dr. Rassouli has held several management positions for the R&D programs and engineering divisions of Ontario Power Generation. He has also taught (and now teaches) MIS at the Rotman School of Management, University of Toronto.

Chapter 4

Ruth Wageman, Ph.D., received her doctorate from Harvard in 1993 and returned there in 2006 as an associate in the Department of Psychology, after serving as a professor at the Columbia University Graduate School of Business and the Tuck School of Dartmouth College. She presently leads the ReThink Health Stewardship initiative of the Rippel Foundation, which focuses on developing multi-stakeholder leadership teams to transform health care. Her research and teaching interests focus on the design and leadership of effective leadership teams, especially ones with civic and social change purposes.

Chapter 5

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chapters. She has a B.S. in electrical engineering from the University of Illinois and an M.S. and Ph.D. in organizational psychology from Saint Louis University. She can be reached at beattyk@ccl.org.

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Chapter 6

Susan R. Meisinger, SPHR, JD, is a widely read columnist on HR leadership for *HRExecutive Online*. She speaks and consults on human resource management issues and is the former president and CEO of the Society for Human Resource Management (SHRM), the world's largest professional association devoted to human resource management. Prior to joining SHRM, Meisinger was appointed by President Ronald Reagan as a deputy under secretary in the U.S. Department of Labor, responsible for more than four thousand employees and enforcement of more than ninety U.S. employment laws. Meisinger is a former board member for the World Federation of Personnel Management Associations, SHRM, the HR Certification Institute, and has corporate board experience. She is a Fellow of the National Academy of Human Resources and the Human Resource Policy Institute. She currently sits on the board of the Certified Financial Planners Board of Standards, the Kronos Workforce Institute Advisory Board, and the National Academy of Human Resources board of directors. Meisinger also co-authored and edited *The Future of Human Resource Management*, published in 2005 by John Wiley & Sons.

Chapter 7

Mark A. Clark (Ph.D., Arizona State University) is an associate professor of management, Kogod School of Business, American University in Washington, D.C. He has more than twenty years of experience in team training, workforce analysis, program development, and action consulting. His research centers on team performance contexts, investigating the effects of culture, diversity, knowledge, and strategic human capital practices. He has published more than two dozen scholarly journal articles and book chapters in academic outlets, including *Group Dynamics*, *Human Resource Management*, *Academy of Management Journal*, and *Journal of Applied Psychology*, and has presented more than forty research papers at international, national, and regional conferences.

Chapter 8

Debra J. Cohen, Ph.D., SPHR, is senior vice president, knowledge development, for the Society for Human Resource Management (SHRM) and is responsible for the society's Knowledge Development Division, which includes the SHRM Knowledge Center (including the Society Library), the Research Department, Academic Initiatives, HR Standards, and Thought Leadership. Dr. Cohen joined SHRM in May of 2000 as the director of research. Prior to joining SHRM, Dr. Cohen spent fifteen years as an academician teaching HRM at George Washington University and George Mason University. Dr. Cohen has published more than forty articles and book chapters and has been published in a variety of journals, including *Journal of Management*, *Academy of Management Journal*, *Personnel Psychology*, *Human Resource Management*, and many others. Dr. Cohen received her Ph.D. in management and human resources in 1987 and her master's degree in labor and human resources in 1982, both from The Ohio State University. She received her bachelor of science in communications from Ohio University. She is a frequent presenter at national, international, and regional conferences and has spoken to a wide variety of audiences. Prior to her academic career, she was a practicing human resources manager in training and development.

Alexander Alonso, Ph.D., in his role as vice president for research at the Society for Human Resource Management, is responsible for all SHRM research activities, including the development of SHRM's Competency Self-Assessment and HR Professionals Competency Model. He also oversees the teams responsible for research products such as People Insight engagement tools, SHRM Benchmarking Services, and the Workplace and Employment Trends Center. Prior to joining SHRM in 2011, Dr. Alonso worked with numerous subject-matter experts worldwide with the aim of identifying performance standards, developing competency models, designing organizational assessments, and conducting job analyses. Among other assignments, he led a project for SHRM to study the state of HR education and supported the development of assessments for university accreditation. Dr. Alonso was part of the team recognized by the Society for Industrial and Organizational Psychology with the 2007 M. Scott Myers Award for Applied Research in the Workplace for the development of the federal standard for medical team training, TeamSTEPPS. He was also honored by the American Psychological Association with the 2009 Presidential Citation for Innovative Practice for supporting the development of a competency model for team triage in emergency medicine. He has published works in peer-reviewed journals such as *Journal of Applied Psychology*, *Personality and Individual Differences*, *Quality and Safety in Health Care*, and *Human Resources Management Review*. He has also served as the chairperson for the SIOP International Affairs Committee and as the vice president for programs of the Personnel Testing Council of Metropolitan Washington. Dr. Alonso received his doctorate in industrial-organizational psychology from Florida International University in 2003.

Chapter 9

Jeanne Wilson, Ph.D., is an associate professor at the Mason School of Business, The College of William & Mary. She received her Ph.D. in organizational behavior and theory from Carnegie Mellon University. Dr. Wilson's research focuses on new organizational forms, particularly distributed work groups and the

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Chapter 10

Sandra A. Almeida, MD, MPH, is the founder and president of Sandra A. Almeida, MD, LLC Healthcare Consulting, and a Captain in the U.S. Navy Reserves (retired). She is a board-certified preventive medicine and public health physician with more than twenty-five years of experience in diverse professional positions, including academic faculty appointments, clinical and research positions, military assignments, and health care consulting. Dr. Almeida has more than twenty years of experience in health care–related organizational safety and team performance improvement. From 1985 to 1993 she served as an active duty U.S. Naval flight surgeon and aeromedical safety officer supporting both U.S. Navy and Marine Corps commands. During that time she helped pioneer the Department of Defense aircrew team performance improvement effort as one of the Marine Corp's first Aircrew Coordination Training instructors. From 1993 to 1995, Dr. Almeida completed her medical training at the University of California San Diego–San Diego State University Preventive Medicine Residency Program and in 1996 took a faculty position at the residency as Director of Research and Thesis Affairs. She has been consulting since 1993 for both government and private-sector organizations, with a focus on the application of epidemiological methods to advance the quality, safety, and therapeutic capacity of modern health care. For the past eight years Dr. Almeida has worked extensively as a principal medical and scientific consultant for the Department of Defense Patient Safety Program. She has assisted in various aspects of program and curricula development, instruction, implementation, and evaluation. She is one

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Heidi King, MS, FACHE, BCC, CPPS, is the acting director for the Department of Defense (DoD) Patient Safety Program and director for the Patient Safety Solutions Center in the Office of the Chief Medical Officer at TRICARE Management Activity, which serves 9.6 million DoD beneficiaries. She delivers innovative solutions to engage, educate, and equip patient-care teams to institutionalize evidence-based safe practices. King promotes the integration of teamwork principles into practice through education, training, research, and outreach. She is a servant leader transforming health care through the spread, impact, and sustainment of high-performing teams in DoD and beyond. King is the lead architect of award-winning TeamSTEPPS®, an evidence-based medical teamwork system aimed at improving communication to optimize patient outcomes and promote a culture of team-driven care. She co-directs the National Implementation of TeamSTEPPS project through an interagency partnership with the Agency for Healthcare Research and Quality, now adopted by military and civilian organizations internationally, with translations in several different languages. King is leading a key Military Health System strategic initiative, Implementing Evidence-Based Practices to Improve Quality and Safety, aimed at decreasing preventable patient harm and readmissions, as DoD is a federal partner in the Partnership for Patients national campaign. King is a recognized speaker, author, collaborator, and certified coach. She is an active steering council member of the Improvement Science Research Network and serves on several boards and expert panels. She received the distinguished Office of the Secretary of Defense Medal for Exceptional Civilian Service in 2007, the National Patient Safety Foundation Chairman's Medal in 2009 for inspiring and leading change through improvement strategies while creating a culture of respect, openness, learning, and team