

Praise for *The Power of People*

“*The Power of People* provides an exceptional primer for doing workforce analytics. It includes wonderful insights from thought leaders, and specific and usable tools for performing analytics.”

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

“Data analytics is a crucial and fast evolving organisational capability. This intriguing and fascinating book demonstrates not only the power of people analytics, but also creates a clear blueprint for building action-taking capability. A must read for any manager determined to add this valuable skill to their portfolio.”

—*Lynda Gratton, Professor of Management Practice, London Business School*

“Trusting your gut on people issues turns out to be a bad idea. Analytics on your workforce is the most rapidly growing field of analytics. *The Power of People* is an excellent guide to this important and burgeoning topic.”

—*Thomas H. Davenport, Distinguished Professor, Babson College,
and Research Fellow, MIT Initiative on the Digital Economy*

“I believe you will find, like I did, that the frameworks and insights in *The Power of People* offer valuable steps toward realizing the potential of your workforce to create sustainable strategic success.”

—*Dr. John Boudreau, Professor, Marshall School of Business;
and Research Director, Center for Effective Organizations,
University of Southern California.*

“This is quite an exceptional book. Extremely well-researched, it constitutes essential reading for those involved in the burgeoning field of Big Data, giving first-rate advice on good practices for all those involved in Workforce Analytics.”

—*Professor Peter Saville, Chairman 10X Psychology and
Founder SHL and Saville Consulting*

“To build an extraordinary workplace, you need to harness the power of analytics. *The Power of People* provides a comprehensive look at latest research, offering best practices for leveraging the wealth of data now within our reach. If you want to master HR, you need to read this book.”

—Ron Friedman, Author of “*The Best Place to Work: The Art and Science of Creating an Extraordinary Workplace*”

“Today’s business executives are applying pressure to all aspects of their business (including HR and workforce areas) to use analytics to improve their bottom line. Despite this pressure there remain few resources for those looking to begin. *The Power of People* is an excellent primer providing definition and guidance for identifying, framing, and successfully deploying analytics solutions to solve workforce challenges.”

—Greta Roberts, CEO Talent Analytics, Corp.

“We are barreling along toward the collision between Big Data, Analytics, and the successful acquisition, development, and retention of people in our organizations. *The Power of People* gives data-led comfort and practical guidance to business leaders that shows we not only can survive the collision, we can harness its potential and emerge with a stronger workforce that is motivated for business and personal success.”

—China Gorman, Board Chair, Universum Americas

“Finally! An authoritative, thoroughly researched, clearly written book to help HR professionals be more data-driven. This volume discusses everything you always wanted to know about workforce analytics but were afraid to ask, with answers from top practitioners in the field.”

—Dr. Tomas Chamorro-Premuzic, Professor of Business Psychology (UCL and Columbia University), CEO of Hogan Assessments, and author of *The Talent Delusion*.

“Today Workforce Analytics is an emerging discipline which, in a few years time, will become mainstream. *The Power of People* is exceptionally practical and inspiring—essential reading for those executives willing to take on the challenge of transforming their organisations. By leveraging the authors’ as well as other leaders’ extensive experience, this book is a true compendium for those wishing to navigate their transformation.”

—Manish Goel, CEO TrustSphere

“*The Power of People* is a great book for those who want to build, refine, or fundamentally improve their HR Analytics offering. The authors have clearly undertaken some extensive research and are drawing on the experience of a wide range of people analytics experts. As a result, their book is full of great advice and can be considered a really good guide for those wanting to realise the full potential of workforce analytics in their organisation.”

—*Dr. Martin Edwards, Kings College London Business School*

“Listening to what employees tell us and acting on it distinguishes ‘average HR’ from ‘HR excellence.’ New analytical capabilities mean we can discern what people are telling us by their actions rather than what they say they would do. *The Power of People* is an excellent book describing how to harness organizational capabilities using workforce analytics to predict what workers are most likely to do in the future and therefore how to impact business outcomes.”

—*Alan Wild, Vice President Human Resources;
Employee Relations and Engagement, IBM*

THE POWER OF PEOPLE

THE POWER OF PEOPLE

Learn How Successful Organizations
Use Workforce Analytics To Improve
Business Performance

NIGEL GUENOLE
JONATHAN FERRAR
SHERI FEINZIG

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Seven Forces of Demand (Chapter 7)

Complexity-Impact Matrix (Chapter 9)

Six Skills for Success (Chapter 12)

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CONTENTS AT A GLANCE

Foreword by John Boudreau	xv
Acknowledgments	xviii
About the Authors	xix
Interviewees	xxi
Vignettes	xxv
Preface	xxvii
I Understanding the Fundamentals	1
1 Why Workforce Analytics?	3
2 What's in a Name?	15
3 The Workforce Analytics Leader	19
4 Purposeful Analytics	27
5 Basics of Data Analysis	43
6 Case Studies	57
II Getting Started	85
7 Set Your Direction	87
8 Engage with Stakeholders	99
9 Get a Quick Win	123
III Building Your Capability	135
10 Know Your Data	137
11 Know Your Technology	157
12 Build the Analytics Team	169
13 Partner for Skills	187
14 Establish an Operating Model	203
IV Establishing an Analytics Culture	225
15 Enable Analytical Thinking	227
16 Overcome Resistance	239
17 Communicate with Storytelling and Visualization	253
18 The Road Ahead	277
Glossary	287
References	295
Index	301

CONTENTS

Foreword by John Boudreau	xv
Acknowledgments	xviii
About the Authors	xix
Interviewees	xxi
Vignettes	xxv
Preface	xxvii
I UNDERSTANDING THE FUNDAMENTALS	1
1 Why Workforce Analytics?	3
Adoption of Analytics	4
HR's Contribution to Business Value	4
The Changing Nature of HR	7
The Future of Work	11
Summary	13
2 What's in a Name?	15
Focus of the Function	16
Activities of the Function	17
A Name Fit for the Future	18
Summary	18
3 The Workforce Analytics Leader	19
Reporting to the Chief Human Resources Officer	20
Responsibilities of the Workforce Analytics Leader	20
Business Acumen	22
Leadership Attributes	23
Summary	26
4 Purposeful Analytics	27
A Model for Purposeful Analytics	28
Project Sponsors	38
Why Do Analytics Projects Fail?	40
Summary	42

5	Basics of Data Analysis	43
	Research Design	44
	Objectives of Analysis	47
	Unstructured Data	52
	Traditional Statistics versus Machine Learning	53
	Social Consequences of Algorithms	54
	More on Design and Analysis	56
	Summary	56
6	Case Studies	57
	Eight-Step Methodology	58
	Case Study: Improving Careers Through Retention Analytics at Nielsen	59
	Case Study: From Employee Engagement to Profitability at ISS Group	65
	Case Study: Growing Sales Using Workforce Analytics at Rentokil Initial	71
	Case Study: Increasing Value to the Taxpayer at the Metropolitan Police	76
	Case Study: Predictive Analytics Improves Employee Well-Being at Westpac	80
	Summary	83
II	GETTING STARTED	85
7	Set Your Direction	87
	You Have the Job! Now What?	88
	Listening to Prospective Project Sponsors	90
	The Seven Forces of Demand	91
	Agreeing on the Scope of Analytics	95
	Developing a Vision and Mission Statement	95
	Summary	97
8	Engage with Stakeholders	99
	Who Are Stakeholders?	100
	Stakeholders Served	101

Stakeholders Depended Upon 106
 Stakeholders Impacted 113
 Working Effectively with Stakeholders 118
 Summary 121

9 Get a Quick Win 123

Identifying Potential Projects 125
 Complexity-Impact Matrix 125
 Assessing Complexity and Impact 129
 Summary 133

III BUILDING YOUR CAPABILITY 135

10 Know Your Data 137

A Pragmatic View of Data 138
 Solving Data Quality Challenges 138
 Data Types and Sources 147
 Data Governance 152
 Remember the Basics 152
 Summary 155

11 Know Your Technology 157

Starting with Vision and Mission 158
 Components of Workforce Analytics Technology 159
 On-Premise Versus Cloud 164
 Technology Vendor Relationships 165
 Summary 167

12 Build the Analytics Team 169

Six Skills for Success 170
 Configuring Team Roles 181
 Remember the Fundamentals! 184
 Summary 185

13	Partner for Skills	187
	Why Consider Partners?	188
	Options for Building the Team	188
	Choosing Among the Options	197
	Summary	200
14	Establish an Operating Model	203
	Defining Your Operating Model	204
	Strategy	205
	Governance	205
	Implementation	212
	Accountability	221
	Summary	224
IV	ESTABLISHING AN ANALYTICS CULTURE	225
15	Enable Analytical Thinking	227
	Perspectives of Analytics in HR	228
	The Translator Role	234
	The Importance of Leadership	236
	Summary	237
16	Overcome Resistance	239
	Resistance to Workforce Analytics	240
	Stakeholder Skepticism	240
	Financial Frugality	245
	HR Hesitancy	246
	Summary	252
17	Communicate with Storytelling and Visualization	253
	What Is Storytelling?	254
	Effective Visualization	263
	Knowing Your Audience	269
	Keeping It Simple	273
	Summary	275

18	The Road Ahead	277
	Analytics Provides New Opportunities for HR.....	278
	Emerging Data Sources	278
	Considering New Data Sources.....	280
	Evolving Technology	282
	The Workforce Analytics Function.....	283
	Summary.....	286
	Glossary	287
	References	295
	Index	301

Foreword by John Boudreau

The availability and power of workforce analytics have never been greater. Leaders, workers, HR professionals, policy makers, and investors increasingly recognize the pivotal role that their people play in strategic success. Organizations face unprecedented change and unpredictability, requiring new organizational forms and processes that work even when you cannot predict the future. Volatility, unpredictability, complexity, and ambiguity lead to a world of greater strategic opportunities but also greater threats and pitfalls.

At the same time, organizations still face the perennial paradox of HR analytics—the substantial opportunity it offers versus the stubborn challenges of making a real impact on decisions, actions, strategy, and organizational outcomes. That paradox is magnified by emerging ethical issues that require organizations to establish limits on what should and should not be measured and reported about employees.

This promise and paradox of workforce analytics explains why so many leading organizations have built workforce analytics functions. Those analytics functions bring together an amazing array of skills and disciplines. To be sure, they include leaders from HR and psychology. However, they often reach out to new disciplines such as marketing, storytelling, engineering, and anthropology. I worked with one organization that had enlisted quantum physicists to apply their frameworks to the complex interactions in the workforce.

This book captures the practical insights from those leaders. It provides a compendium of frameworks and guides for building and realizing the value of workforce analytics expertise, whether it resides in a dedicated function or is dispersed across the organization. With this book, you sit at the shoulder of seasoned and experienced workforce analytics leaders, and hear their “voice” to guide your workforce analytics journey. It aims to show how organizations can tap the power of people through analytics.

Workforce analytics has existed since the first craftsmen hired apprentices and assistants, observed the quality and quantity of their work, and formulated pre-hire apprenticeships and other tests to detect their ability. The two World Wars motivated the development of sophisticated aptitude tests that revolutionized the assignment and training of troops. The 1960s and 1970s saw the emergence of systems designed to measure the cost and value of the workforce, and “put people on the balance sheet.” In the 1980s and 1990s, the Saratoga Institute and others developed benchmark indices for the entire employment lifecycle, from recruitment, to development, to rewards, to engagement, to retention. Yet, today the issue of workforce analytics has reached a tipping point. The information formerly contained in a six-inch report from the Saratoga Institute in the 1990s is now available at the click of a button in many of today’s human resources systems. Reports and

statistical analyses that once took months to compile using paper and spreadsheets now appear instantly. Data mining tools can now unearth relationships that were previously invisible. Predictive analytics hold the promise of calculating a “risk-of-leaving” index for every employee, which changes with their work and life situation, and alerts managers to take preventive action. Today, the limits on workforce measurement are seldom due to a lack of data or computing power. The priority has shifted from gathering and reporting data to making sense of the data, finding the pivotal stories, and getting the insights to those who can make the critical decisions—whether they be leaders, managers, employees, boards, or investors.

As mentioned in the first two chapters of this book, when I recently worked with a unique volunteer gathering of more than 50 chief human resources officers and other thought-leaders (see www.CHREATE.net), we identified five forces that will change the nature of organizational success. These include social and organizational reconfiguration, an all-inclusive global talent market, and a truly connected world. These forces will change the very nature of work, which will be more democratic with shorter-duration and varied work relationships that are more balanced between the worker and the workplace, and more agile and responsive work arrangements through purpose-built networks, supported by social norms and policies. Work via platforms, projects, gigs, freelancing, contests, contracts, and tours of duty will evolve and be increasingly empowered by automation and technology.

Leaders instinctively know that to answer these demands will rely on people, and that great decisions about their workforce should rest on evidence and analysis. They can clearly see the coming deluge of Big Data about the workforce, enabled by personal devices, cognitive computing, cloud-based storage and applications, and the innovative reconstruction of work to blend humans and automation. They can see powerful real-time analytics applied to global supply chains, consumer insights, and financial investment optimization, and they yearn for workforce analytics that offers similar insights and decision power. For example, when interviewed about the future of their organization, one chief executive officer said, *“I know that culture is vital to our future, and what I need is a chief operating officer of culture, who can measure, analyze and support my decisions about culture with the same rigor that my chief operations officer can measure, analyze and support decisions about our operations.”* A pillar of such a role will be workforce analytics.

So, workforce analytics must become a standard capability in the field of human resources, and every organization should expect HR to have that competency. Yet, workforce analytics must also become a capability outside the HR profession. Just as leaders, investors, and workers are expected to have facility with analytics applied to money, customers, and technology, they should also be more adept at using

and understanding workforce metrics. Leaders must demand workforce analytics functions that not only respond to their requests, but that proactively guide them toward insights. In *The Power of People*, you will find frameworks to help answer these demands, and the descriptions of analytics leaders who are doing it. This makes a substantial contribution to the existing materials and builds on frameworks like LAMP (logic, analytics, measure, and process) that I currently use.

I believe you will find, like I did, that the frameworks and insights in *The Power of People* offer valuable steps toward realizing the potential of your workforce to create sustainable strategic success.

John Boudreau

Professor of Management and Organization, and
Research Director of the Center for Effective Organizations,
University of Southern California

February 2017

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We are grateful to several people at IBM who helped with particular aspects: Xiaoyuan (Susan) Zhu for assistance with literature reviews for Chapter 17, Jackie Ryan for her help on Chapter 10, Sadat Shami for his help on Chapter 5, Dave Millner for reviewing Chapters 1 and 18, and Emily Plachy and David Green for general guidance. Finally, we thank Steven Stansel for guidance and coaching in turning our idea into a comprehensive proposal.

—Nigel Guenole, Jonathan Ferrar, and Sheri Feinzig

I would like to thank my wife, Magdalena, my daughters, Mia and Olivia, and my parents, Geoff and Aivi.

—Nigel Guenole

I would like to thank my late Great Uncle Bill (William Ferrar), who sent me two of his own books on calculus as a gift when I was 12 years old and spurred me on in my own life to write and share my experiences with others. I thank my son, Arthur, who has brought much joy to my life and reminded me throughout the writing of this book of the importance of balance in life. I also wish to thank my parents, James and Janet, and sister, Melloney, who have supported me through the peaks and troughs of life and for keeping me grounded.

—Jonathan Ferrar

I would like to thank my mother, Marilyn, my lifelong source of inspiration, and my late father, Stanley, my role model for having a dream and making it a reality. Thanks to my brother, Roy, and sister, Bonnie, for always being there to celebrate my successes. And my most heartfelt thanks to my husband, Steven, and our children, Ileana and Zachary, who allowed me the hours during countless nights and weekends to “work on the book.” You mean everything to me, and this could not have happened without you.

—Sheri Feinzig

About the Authors



Nigel Guenole is an executive consultant with IBM, where he consults with many of the world's most successful organizations about improving organizational performance with psychological science. He is also Director of Research at the Institute of Management at Goldsmiths, University of London. Nigel's consulting, research, and teaching focus on topics in industrial-organizational psychology and statistical modeling. He is an associate fellow of the British Psychological Society (BPS), a member of the Academy of Management (AOM), and a member of

the Society for Industrial and Organizational Psychology (SIOP). His work on topics related to workforce analytics has been featured in the media and popular press, as well as in numerous scientific journals, including *Frontiers in Quantitative Psychology & Measurement* and *Industrial and Organizational Psychology: Perspectives on Science and Practice*.



Jonathan Ferrar is a respected consultant, speaker, and influencer in HR strategy, workforce analytics, and the future of work. He advises clients on how to establish human resources strategies that will improve business performance and make HR more relevant. He was listed as one of the global Top 50 HR Analytics Influencers on LinkedIn in 2014 and as one of the 15 HR and People Analytics Experts to Follow for 2017 by Jibe. Before he started his own consultancy business, Jonathan worked for more than 25 years in corporate business in IBM, Andersen

Consulting (now Accenture), and Lloyds Bank, for many of those years in senior executive management roles in both the United Kingdom and the United States. Jonathan has worked with C-suite clients and business leaders across the globe on human resources management and workforce analytics. He holds a bachelor of arts degree and a master of arts degree from the University of Cambridge and a postgraduate diploma in human resources management from Kingston Business School. He is a Chartered Fellow of the Chartered Institute of Personnel and Development (Chartered FCIPD).



Sheri Feinzig is a director at IBM, where she leads a global team of consultants, content development experts, and the Smarter Workforce Institute. Sheri has more than 20 years of experience in human resources research, organizational change management, and business transformation. She has applied her analytical and methodological expertise to numerous research-based projects on topics such as employee retention, employee engagement, performance feedback, social network analysis, and organizational culture. Sheri received her Ph.D. in Industrial-Organizational Psychology from the

University at Albany, State University of New York. She has presented on numerous occasions at national conferences and has coauthored a number of publications and white papers. She has served as an adjunct professor in the psychology departments of Rensselaer Polytechnic Institute in Troy, New York, and the Illinois Institute of Technology in Chicago, Illinois, where she taught doctoral, masters, and undergraduate courses on performance appraisal, tests, and measures. Sheri is a member of the Society for Industrial and Organizational Psychology (SIOP).

Interviewees

The material in this book is derived in part from interviews the authors collectively undertook with dozens of analytics practitioners, human resources leaders, business executives, academics, and consultants. Together they represent a global perspective on the state of the art regarding workforce analytics. Conversations occurred between January and October 2016.

- **Al Adamsen.** Founder and Executive Director, Talent Strategy Institute. San Francisco, CA, United States.
- **Peter Allen.** Managing Director, Agoda Outside. Singapore, Republic of Singapore.
- **Morten Kamp Andersen.** Partner, proacteur. Copenhagen, Denmark.
- **Ian Bailie.** Global Head, Talent Acquisition and People Planning Operations, Cisco. London, United Kingdom.
- **Laurie Bassi.** CEO, McBassi & Company. New York, NY, United States.
- **Michael Bazigos.** Managing Director, Global Head of Organizational Analytics & Change Tracking, Accenture Strategy. New York, NY, United States; and Professor, Organization and Leadership Development, Columbia University. New York, NY, United States.
- **Mark Berry.** Vice President and Chief Human Resources Officer, CGB Enterprises, Inc. New Orleans, LA, United States.
- **Josh Bersin.** Principal and Founder, Bersin by Deloitte. Oakland, CA, United States.
- **Mats Beskow.** Director of Human Resources, Landstinget Västmanland. Stockholm, Sweden.
- **Max Blumberg.** Founder, Blumberg Partnership, Ltd. London, United Kingdom; and Visiting Researcher, Goldsmiths, University of London. London, United Kingdom.
- **John Boudreau.** Professor of Management and Organization, and Research Director of the Center for Effective Organizations, University of Southern California. Los Angeles, CA, United States.
- **Ralf Buechsenschuss.** Global HR Manager, People Analytics & Transformation, Nestlé. Vevey, Switzerland.
- **John Callery.** Managing Director, Global Head of Workforce Strategy, BNY Mellon. New York, NY, United States.

- **Marcus Champ.** Senior Manager, HR Analytics, Standard Chartered Bank. Singapore, Republic of Singapore.
- **Arun Chidambaram.** Head of Global Talent Analytics, Pfizer. New York, NY, United States.
- **Patrick Coolen.** Manager HR Metrics and Analytics, ABN AMRO Bank N.V. Amsterdam, Netherlands.
- **Christian Cormack.** Head of HR Analytics, AstraZeneca. Cambridge, United Kingdom.
- **Damien Dellala.** Head of People Data & Analytics Enablement, Westpac Group. Sydney, Australia.
- **Sally Dillon.** Head of Business Intelligence at UK Life, Aviva. York, United Kingdom.
- **Antony Ebelle-ebanda.** Global Director HCM Insights, Analytics & Planning, S&P Global (formerly McGraw Hill Financial). New York, NY, United States.
- **Giovanni Everduin.** Head of Strategic HR, Communications & Change, Tanfeeth. Dubai, United Arab Emirates.
- **Alexis Fink.** General Manager, Talent Intelligence & Analytics, Intel Corporation. Seattle, WA, United States.
- **Jonathon Frampton.** Director, People Analytics, Baylor Scott & White Health. Houston, TX, United States.
- **David Green.** Global Director, People Analytics Solutions, IBM. London, United Kingdom.
- **Peter Hartmann.** Director, Performance, Analytics and HRIS, Getinge Group. Malmö, Sweden.
- **Mark Huselid.** Distinguished Professor of Workforce Analytics and Director, Center for Workforce Analytics, Northeastern University. Boston, MA, United States.
- **Placid Jover.** Vice President of HR–Organisation & Analytics, Unilever. London, United Kingdom.
- **Dawn Klinghoffer.** General Manager, HR Business Insights, Microsoft. Redmond, WA, United States.
- **Terry Lashyn.** Director, People Intelligence, ATB Financial. Edmonton, Alberta, Canada.

- **Tracy Layney.** Senior Vice President & Chief Human Resources Officer, Shutterstock, Inc. Redwood City, CA, United States.
- **Alec Levenson.** Economist and Senior Research Scientist, Center for Effective Organizations, University of Southern California. Los Angeles, CA, United States.
- **Stela Lupushor.** Head of People Analytics, Fidelity. Boston, MA, United States.
- **Eric Mackaluso.** Senior Director, People Analytics, Global HR Strategy & Planning, ADP. Roseland, NJ, United States.
- **Salvador Malo.** Head of Global Workforce Analytics, Ericsson. Mexico City, Mexico.
- **Andrew Marritt.** Founder, OrganizationView. Zürich, Switzerland.
- **Piyush Mathur.** Senior Vice President, Global People Analytics, Nielsen. Wilton, CT, USA.
- **Dave Millner.** Executive Consulting Partner, IBM. London, United Kingdom.
- **Mihaly Nagy.** CEO, The HR Congress and Managing Director, Stamford Global. Budapest, Hungary.
- **Ben Nicholas.** Director of Global HR Data & Analytics, GlaxoSmithKline. London, United Kingdom.
- **Adam Chini Nielsen.** Workforce Planning Manager, Nordea. Copenhagen, Denmark.
- **Andre Obereigner.** Senior Manager, Global Workforce Analytics. Groupon. Zürich, Switzerland.
- **Martin Oest.** Director and Partner, True Picture Europe Limited. Manchester, United Kingdom.
- **Peter O'Hanlon.** Founder and Managing Director, Lever Analytics. Sydney, Australia.
- **Ian O'Keefe.** Managing Director, Head of Global Workforce Analytics, JPMorgan Chase & Co. New York, NY, United States.
- **Sofia Parveen.** Wealth Management Remuneration & Development Specialist, Nordea. Copenhagen, Denmark.
- **Tanuj Poddar.** HR Analytics Consultant, Citibank. Mumbai, India.

- **Thomas Rasmussen.** Vice President, HR Data & Analytics, Shell. Amsterdam, Netherlands.
- **Jackie Ryan.** Director, Watson Talent Analytics, IBM. San Jose, CA, United States.
- **Kanella Salapatas.** HR Data Manager and Reporting Service Owner, ANZ Bank. Melbourne, Australia.
- **Sadat Shami.** Director, Center for Engagement & Social Analytics, IBM. New York, NY, United States.
- **Jeremy Shapiro.** Global Head of Talent Analytics, Morgan Stanley. New York, NY, United States.
- **Luk Smeyers.** Co-founder iNostix by Deloitte. Antwerp, Belgium.
- **Mariëlle Sonnenberg.** Global Director, HR Strategy & Analytics, Wolters Kluwer. Amsterdam, Netherlands.
- **Simon Svegaard.** Business Analytics Manager, ISS Facilities Services A/S. Copenhagen, Denmark.
- **Eric van Duin.** Manager HRIS & Analytics, PostNL N.V. The Hague, Netherlands.
- **Bart Voorn.** Lead HR Analytics, Ahold Delhaize. Zaandam, Netherlands.
- **Rebecca White.** Talent Analytics Senior Manager, LinkedIn. San Francisco, CA, United States.
- **Patrick Wright.** Thomas C. Vandiver Bicentennial Chair in Business, Darla Moore School of Business, University of South Carolina. Columbia, SC, United States; and Director, Center for Executive Succession, Darla Moore School of Business, University of South Carolina. Columbia, SC, United States.
- **Paul Yost.** Associate Professor, Seattle Pacific University. Seattle, WA, United States.
- **Susan Youngblood.** Global Senior Director of Human Resources, BNY Mellon. New York, NY, United States.

VIGNETTES

Several vignettes have been incorporated into chapters throughout the book. Each is meant to highlight specific practical tips. We are particularly thankful to the interviewed experts who agreed to include their ideas and stories.

Chapter 1, “Why Workforce Analytics?”

- “Run Your Business with Analytics,” by Tracy Layney
- “The Future of HR Is Analytics,” by Mark Huselid

Chapter 3, “The Workforce Analytics Leader”

- “Be Ego-less,” by Alexis Fink

Chapter 4, “Purposeful Analytics”

- “Relationship Power,” by Morten Kamp Andersen

Chapter 7, “Set Your Direction”

- “Preparing for Success: The First Few Months,” by John Callery
- “Understand Your Culture, Understand Your Demand,” by Peter Allen

Chapter 8, “Engage with Stakeholders”

- “The Case for Workforce Analytics: CEO Succession,” by Patrick Wright
- “Bring Finance Along with You,” by Martin Oest
- “Gaining Credibility with Executives,” by Adam Nielsen and Sofia Parveen

Chapter 9, “Get a Quick Win”

- “An Inspired First Project,” by Eric van Duin
- “Simple Changes, Big Impact,” by Marcus Champ

Chapter 10, “Know Your Data”

- “Don’t Let the Lack Of One Integrated HRIS Stop You,” by Mariëlle Sonnenberg
- “A Data Dictionary Brings You Credibility,” by Giovanni Everduin

Chapter 11, “Know Your Technology”

- “A Mind-Set for Technology,” by Kanella Salapatras
- “Drillability Is Key,” by Sally Dillon

Chapter 12, “Build the Analytics Team”

- “A Blend Of Skills Is Best,” by Rebecca White
- “Invest in Data Privacy Skills,” by Dawn Klinghoffer
- “Anticipating Business Needs,” by Ian Bailie

Chapter 13, “Partner for Skills”

- “Start Small, Keep It Focused,” by Thomas Rasmussen
- “Accelerating Time to Value with an External Partner,” by Patrick Coolen

Chapter 14, “Establish an Operating Model”

- “Set Yourself Up for Success,” by Damien Dellala
- “Tips for Successful Analytics Operations,” by Placid Jover

Chapter 15, “Enable Analytical Thinking”

- “Clarifying What Analytics Is and What It Is Not,” by Salvador Malo
- “Building a Culture of Analytics Through Training,” by Bart Voorn

Chapter 16, “Overcome Resistance”

- “The Accountability Hazard,” by Luk Smeyers
- “Don’t Take ‘We Can’t’ for An Answer,” by Andre Obereigner

Chapter 17, “Communicate with Storytelling and Visualization”

- “An Analytics Project Summarized in One Sentence,” by Mark Berry
- “Simplify Your Story,” by Paul Yost.

Preface

Workforce analytics is the discovery, interpretation, and communication of meaningful patterns in workforce-related data to inform decision making and improve performance.

The human race's quest for information is never ending. Businesses and organizations are no exceptions. Business leaders continually seek out knowledge about their organizations to gain insights from all the data that exist so that they can make evidence-based decisions to improve the organization's performance and gain competitive advantage in the marketplace.

The discipline called analytics exists to meet this need. Analytics concerning human resources, people, and the workforce is known as workforce analytics. *The Power of People* explores how to establish, operate, and lead workforce analytics to better serve organizational ambitions.

Background to *The Power of People*

In researching the world of analytics, we came across the book *Competing on Analytics* (Harvard Business Review Press, 2007) by Thomas Davenport and Jeanne Harris. That book remains a well-referenced resource on the topic of analytics and reminds us just what a difference a good book can make in exploring new disciplines. Davenport and Harris's book was recommended to us as a starting point for all analytics, so we pass on that recommendation to you. In addition, we recommend an article that evolved from that book, called "Competing on Talent Analytics" (*Harvard Business Review*, October 2010). Laszlo Bock, former Senior Vice President of People Operations at Google, has more recently authored a book *Work Rules! Insights from Inside Google That Will Transform How You Live and Lead* (Twelve Books, 2015) that has ignited the interest of businesses globally with its scientific and analytical approaches to the world of work.

All of these resources provide an excellent start for the topic of analytics applied to work. However, we still felt there was a gap in the market for more detailed guidance on how a wide variety of organizations can successfully implement workforce analytics. This topic is the focus of the book you are now reading.

So how did our book come about? We three authors first met in 2013. We come from different cultural, national, and professional backgrounds, but between 2013 and 2015, we collectively and individually wrote several articles and undertook research on topics related to people, work, and analytics. Something important happened in spring 2015. Together with a fourth colleague, we wrote and published a paper called "Starting the Workforce Analytics Journey: The First 100 Days." The paper was launched at an analytics conference in New York, with 50 copies available for a free takeaway. Early on the first day of the conference, we discovered that all 50 copies of the paper had been taken. We printed another batch, and all of those also disappeared during the conference. The overwhelming feedback from conference attendees was that it was the first document people had read that gave a structured approach and practical tips on how to undertake workforce analytics.

Within a few days we published an infographic and other material. Then we took a step back to discuss the success of the paper. Clearly, we had only scratched the surface with our paper; a book would deliver much more practical guidance to our thirsty audience. And so the book began. Over the next several months, we met many people and interviewed scores of experts in the analytics space—academics, consultants, practitioners, HR leaders, and data scientists. We cannot thank those people enough for the insights they provided, which helped shape this book into what it has become.

Who Is the Audience for This Book?

This book is for anyone who is interested in improving business performance through the use of workforce data and analytics. In particular, we researched and wrote this book with the following audiences in mind:

- Business executives who want more from HR
- HR executives or leaders who want to understand how to set up analytics for success
- HR professionals who are charged with establishing, leading, or managing an analytics function
- HR professionals who want to enhance their knowledge and skills in workforce analytics

Our Approach

Building and running a workforce analytics function and delivering meaningful projects that improve business performance can be complicated, but learning from the experiences of others can help in successfully navigating the journey. As we collected ideas from others, we amalgamated those into four parts in this book.

Part I: Understanding the Fundamentals

Part I focuses on how workforce analytics got its name, why it is important, and its potential business impact. It also articulates a recommended approach to undertaking any analytics project, to ensure that it has purpose and clarity and also uses robust research design and analysis. In addition, this part offers case studies to help the reader understand potential benefits. Finally, we discuss the important role of the workforce analytics leader and why that person is essential for success.

This first part is important for everyone to read because it covers the fundamental elements you need before you get started. Business and HR leaders will be particularly interested in Chapter 1, “Why Analytics?” and Chapter 6, “Case Studies,” to understand potential value from a workforce analytics team or function.

Part II: Getting Started

Part II focuses on important concepts when starting out in workforce analytics, such as establishing the purpose of a workforce analytics program, determining why your organization wants analytics, and identifying where that demand is coming from. It also focuses on the stakeholders who will enable success and how to get started with “quick win” projects.

This part helps chief human resources officers (CHROs), aspiring workforce analytics leaders, and HR professionals tackle the first few steps and it details what they might spend the first few weeks and months doing.

This part is also helpful for anyone who wants to collect ideas about workforce analytics before recruiting someone to lead the function.

Part III: Building Your Capability

Part III enables workforce analytics leaders and other HR executives to really understand how to ensure success. It has detailed sections on managing data, technology, and partners, plus suggestions for necessary skills. Finally, this part recommends an operating model to ensure continued and integrated success of workforce analytics as it becomes operationalized in the organization.

This part gives the reader practical tips and recommendations for ensuring continued and long-lasting success. It is particularly aimed at analytics leaders and HR executives who are accountable for workforce analytics.

Part IV: Establishing an Analytics Culture

Sometimes simply undertaking analytics projects is not enough. Instead, time and energy are needed to change the culture of the organization. Part IV focuses specifically on how to change your organization's HR function from largely administrative to one that embraces an analytical mindset. In addition, this part focuses on two skills that HR usually lacks: storytelling and visualization. Finally, Part IV envisions what might happen in the field of workforce analytics in the next few years.

This part is useful for HR and other business professionals who need to tell stories around an analytics topic and who need to change the mindset of the people with whom they interact.

For Reference

At the end of the book, we provide a glossary that gives standardized terms and definitions for important elements of workforce analytics. Many analytics leaders requested this list to aid them in meaningful discussions with business leaders without getting lost in confused terms and misunderstandings. Using standardized terms, we can build a professional common understanding of workforce analytics.

Practical Tips

A growing number of people around the world are involved in the field of workforce analytics. We were in touch with many of these people while writing this book. We talked to speakers and attendees at conferences, we spoke with global business leaders and practitioners, and we formally interviewed many of the world's leading practitioners of workforce analytics.

Almost everyone we spoke with in researching this book asked us to provide practical tips. Most people recommended that we focus the book not on the *why*, but more on the *how* and *what*. In response, we added practical pointers from the people who practice this every day. In addition, at the end of each chapter, we summarize the main points that we believe will prepare leaders and practitioners as they set up or expand their analytics practice. Furthermore, this book contains vignettes that describe experiences from real professionals and offer great insights into their successes.

As in the pursuit of data perfection, it is not our expectation that a book such as this can ever be 100 percent complete. We do not claim to supply every answer or cover every possible situation. But we do have a rich collection of practical advice to share, based on our own experience and the advice of other analytics practitioners, academics and leaders.

Whatever your role, and whatever your reason for reading this book, our goal is to add insight and practical knowledge to the world of workforce analytics. We hope you find it helpful in developing your function and improving your organization's performance.

Visit the authors' website at www.thepowerofpeople.org for more details about the book.



Understanding the Fundamentals

1	Why Workforce Analytics?.....	3
2	What's in a Name?	15
3	The Workforce Analytics Leader	19
4	Purposeful Analytics	27
5	Basics of Data Analysis.....	43
6	Case Studies	57

Why Workforce Analytics?

“Industries are being disrupted. Talent is more mobile. All organizations need to understand the workforce better, and how it is executing the business strategy. And workforce analytics is at the heart of how to do this.”

—Mark Huselid

Distinguished Professor of Workforce Analytics, Northeastern University

In a globally connected world of Big Data, complexity, and disruption, the business landscape is evolving faster than ever. Growing competition for talent coupled with shifting worker expectations and opportunities are changing the very nature of work. More data exist about people than ever before, along with more advanced technology for analysis. These developments are requiring changes of the human resources (HR) function, which needs to adopt an analytical mind-set and become more quantitative. Workforce analytics allows organizations to gain insight about people at a level never before witnessed, offering competitive advantage to improve business performance.

The reasons driving HR's adoption of workforce analytics can be summarized in the following categories covered in this chapter:

- The need for HR to contribute to business value
- The democratization and consumerization of HR
- The evolution of work

Adoption of Analytics

Many organizations are already realizing the benefits of analytics. A 2014 PWC report, written by The Economist Intelligence Unit, found that 89 percent of large company executives surveyed either already were using Big Data to make decisions or planned to start doing so in the next three years. In HR specifically, in its 2016 CHRO report, IBM found that the number of chief human resources officers (CHROs) using predictive analytics to make more informed workforce decisions across HR activities had increased by approximately 40 percent over two years. The evidence of the trend is clear, as Deloitte's Global Human Capital Trends 2017 reports: "People Analytics, a discipline that started as a small technical group that analyzed engagement and retention, has now gone mainstream."

HR's Contribution to Business Value

In the commercial world, businesses need to stay ahead of their competitors to sell more products and services and to increase revenue and profit. The general aim of businesses is to increase market share and value for their owners. In the public or voluntary sector, organizations need to increase value through efficiency and effectiveness in delivering products and services to their constituents, whether they are service recipients, taxpayers, or donors.

Whether public, voluntary, or private, all organizations need to deliver value. This requires using financial metrics and key performance indicators to monitor and improve operations. Evidence already shows the importance of workforce analytics to profitability, one key financial metric. In a 2015 KPMG report, written by the Economist Intelligence Unit, a large majority of executives (91 percent in IT and technology, 81 percent in biotechnology, and 70 percent in financial services and healthcare) indicated that an increase in the use of data-driven insights in their HR function would affect profitability over the subsequent three-year period.

As organizations seek to improve performance, the onus is on HR to build value. The best way to do this is through an analytical approach. This is not necessarily where HR has seen itself in the past. Patrick Wright, a professor at the University of South Carolina, states: "When you hear about the work of Finance, Marketing, or Information Technology, it's about numbers, numbers, numbers. When you hear about the work of HR, it's about words, words, words." We also believe, however, HR should not aim to transform itself into a *purely* analytical function and lose touch with the human behaviors and characteristics that also help people and businesses succeed.

For many organizations, the analytical transformation has already begun in areas familiar to HR, such as attrition and retention analytics, recruitment analytics, workforce planning, compensation optimization, and employee engagement. John Boudreau, a professor at the University of Southern California, has witnessed this: “There are some very prominent examples of analytics being used to answer important questions in HR—for example, which people will leave and how successful a candidate will be if hired. These are important questions that have been answered with analytics.”

Workforce planning is another area of HR that is ripe for analytics attention because analytically driven techniques make it more strategic and sophisticated. Salvador Malo, Head of Global Workforce Analytics, explains how this is playing out at Ericsson: “Optimizing the workforce requires a two-pronged approach: First, understand the business requirements and translate these into needs for the future; second, get to know your workforce in some depth. Together these insights about the business and the people who work in it will lead to recommendations that improve workforce planning.”

Prediction of attrition and candidate success, and workforce planning are all important topics for workforce analytics attention. Even greater value is realized when workforce analytics contributes to business outcomes. An impressive body of scholarly literature¹ shows that a firm’s HR practices affect performance outcomes at all levels, from individual employees, teams and units, all the way to organizations as a whole. These HR practices can improve the breadth and depth of employee knowledge and skills in organizations—for example, through learning and development or the attraction, selection, and retention processes.

“Our job as analytics experts is to ask the tough questions to enable executives to better manage their organization and perform their fiduciary duties.”

—Alec Levenson, Economist and Senior Research Scientist,
Center for Effective Organizations, University of Southern California

A multiyear project undertaken in ISS, a global facilities services organization, offers an example of how workforce analytics contributes to business outcomes. The project brought together employee engagement and customer advocacy data to link to financial outcomes. ISS concluded that when both employee engagement and customer advocacy are high, profitability is highest. The average profitability in units scoring highest on both dimensions was 7.75 percent, versus 4.52 percent in the lowest-scoring groups.

¹ For pioneering work in this field, see the contributions of Mark Huselid, Distinguished Professor of Workforce Analytics, at Northeastern University.

RUN YOUR BUSINESS WITH ANALYTICS

“My perspective on analytics in HR is that every other business leader I know runs their business with analytics, but there’s a black hole when it comes to HR.” This is the view of Tracy Layney, Senior Vice President and Chief Human Resources Officer (CHRO) at Shutterfly, Inc.²

She goes on to explain two general types of analytics, which she tries to keep separate:

- **True workforce analytics.** The approach of measuring behaviors in organizations and knowing how to knit them together to improve business performance. The approach is similar to that taken with customer behavior, but this one concerns employee behaviors.
- **HR analytics.** The functioning of the HR team itself—for example, analyzing key performance indicators (KPIs) such as time to hire. Such analytics are about holding the HR team accountable.

Tracy says that every CHRO should be focusing on the first point. “We should be giving more levels of data showing leading and lagging indicators about our people. We have to make it an ‘insights’ exercise, not a reporting exercise—for example, using the insights to achieve business outcomes, or to expand into new markets.”

She says it is essential to both increase the skills in HR and reset the mindset of business executives. “We talk about increasing the skills of HR, but we have to recognize that we [HR] have also trained our leaders how to think about the people part of their business, for example—to run it in a very program-driven way (such as the annual salary cycle or talent reviews). We have to push out of those expectations, to do things quite differently.”

Tracy concludes, “This is a huge area of opportunity for the HR profession. Workforce analytics and strategy together is a really powerful combination.”

² In 1999, Shutterfly, Inc., began as a company that helped people print 4-by-6-inch photographs from their digital cameras. Today it is an industry leader for photo and video storage, award-winning photo books, gifts, home decor, premium cards, invitations, stationery, and much more. Shutterfly is headquartered in Redwood City, California (www.shutterflyinc.com).

A second project, this time at global pest control firm Rentokil Initial, focused on the predictability of sales success. The project isolated the key behaviors of high-performing sales professionals and used automated assessment techniques to select future candidates based on those behaviors. Global sales rose more than 40 percent and the project had a return on investment of more than 300 percent.

These examples, described in more detail in Chapter 6, “Case Studies,” demonstrate that workforce analytics can contribute not just to improving the effectiveness of HR processes, but also to improving and predicting business outcomes such as profitability and sales.

The Changing Nature of HR

Workers, managers, and executives are demanding more from their HR function.

- **The need for more information to “run the business.”** The required response to this is the democratization of HR.
- **The desire for personalized services.** The required response to this is the consumerization of HR.

These demands strengthen the argument for workforce analytics because analytics can help deliver insights directly to managers and also provide intelligence that enables the personalization of services to employees.

Democratization of HR

At a time when data are more readily available than ever, HR is being asked for more information, better insights, and more precise recommendations to help executives and managers run their businesses. This puts a strain on the traditional HR function that primarily dealt with the process side of recruitment, resourcing, development, and employee relations. For the last 40 years or so, HR has delivered structured programs, developed policies, and implemented best practices to allow executives and managers to manage people in a cyclical pattern—for example, through annual performance reviews, specific salary increase programs, and succession planning cycles. However, the demand has changed and new requests for information are emerging, as Table 1.1 illustrates.

Table 1.1 Examples of Traditional, Current, and Future HR Requests from Managers

Topic	Traditional	Current	Future
Recruitment	"I need to recruit someone. How do I do it?"	"I need someone new. How do I know where the best people come from and who will be the best fit for my team?"	"Can you recommend the best fit people to me in advance of needing them so I have a ready bank of suitable candidates?"
Learning and Development	"What courses are available for sales people?"	"I want something to help Joe with a client meeting he's got tomorrow—a short video would be great."	"Can you notify Joe of both his learning needs now and his needs over the next year? Please recommend development actions similar people have taken and send him articles he can read."
Compensation	"Gabrielle has resigned and I would like to give her a salary increase to see if we can save her."	"I would like to be notified when people are at risk of leaving."	"I would like to be given salary and benchmark information for all my people to help me keep abreast of market conditions in each location. I'd also like recommendations on ways to retain my key people."
Health and Wellness	"What are the benefits in this company?"	"Can we have benefits tailored to employees by location, level, age, and experience?"	"Can we push notifications to people (in advance) about the health and wellness benefits that meet both their lifestyle needs and our needs in the company?"
Leadership	"What are the succession plans for my team?"	"Who are the best leaders in the company? Who best fits our future needs and our values to ensure our success?"	"What behaviors, skills, and attributes best fit the current and future leadership needs of our company? How do we nurture our current people, recruit new people, and manage succession to enable a stable future as our marketplace evolves?"

For executives and managers to get timely answers to questions and make informed decisions about their people, they need information, insights, and recommendations. HR needs to respond to these requests in real time, providing information and insights to managers and executives as they need it. The workforce analytics function is at the heart of this change because HR is sharing more than just data with managers and executives—it is also giving them business insights and recommendations generated by sophisticated algorithms.

Consumerization of HR

Bringing the type of customization experienced by consumers to the world of work can yield great benefits. In 2012, Amazon reported a 29 percent increase in second quarter fiscal results. A *Fortune* article at the time discussed how Amazon's recommendation engine contributed much to that success by using algorithms to heavily customize the browsing experience for returning customers.

HR can learn a lot from examples like this and begin to use its data to create predictive models for the “workforce of one” (a term referring to personalized employee experiences in Accenture's report “The Future of HR: A Radically Different Proposition”). But more than this, workers are starting to expect similar customization from their employers. Many workers would appreciate recommendations to improve their working experience. This change is referred to as the consumerization of HR, further discussed by Mark Feffer in a 2015 Society for Human Resource Management article focused on recruitment: “Today, job seekers are thought of as customers.”

Examples of workforce personalization include the following:

- Recommendation of modular courses to enhance employees' skills
- Information on benefits relevant as a worker enters new life stages (for example, a new baby, marriage, or house purchase)
- Internal job and career moves that best meet a worker's skills and expertise
- Opportunities to contribute to projects across the business based on an individual's expertise and knowledge
- Provision of performance feedback in real time through manager-to-employee and peer-to-peer social feedback

Ian Bailie, Global Head, Talent Acquisition and People Planning Operations at Cisco, explains how the consumerization of HR begins with the Cisco Talent Cloud, a huge database of all workforce-related data: “The primary catalyst of the Talent Cloud was for employees to manage their own development. For example, it helps

them find training that matches directly to skills, as well as potential new jobs and new assignments. It also gives them visibility of opportunities across Cisco, breaking down silos. All that is in the employees' hands. And that gives us an overview of the entire workforce that is also really helpful in running the business.”

THE FUTURE OF HR IS ANALYTICS

Mark Huselid, Distinguished Professor at Boston's Northeastern University, is one of the world's experts in workforce analytics.³ He sees this area as the future for the HR profession. “In my experience, the outside world is changing more quickly than the organization is changing on the inside. So there is an increased demand for talent related information.

“The arc of the analytics story is that it is both very new and very old. We've been playing at this for a long time. So what's new? A confluence of factors: access to data and better, easier, faster analytics tools.” The workplace is also changing with the Internet, social media, smartphones, and work marketplaces for jobs virtually everywhere and for any skill. “Executing strategy through the workforce, and helping managers do a better job of that has gotten much more complex,” Mark says.

And so we come to analytics. “I was at Rutgers University for two decades at the School of Labor Relations,” Mark says. “I focused on HR in that program. I spent a lot of time working with executives and trying to understand from them the relative returns of HR. Analytics is just the next evolution and there's a lot more interest now in building analytical skills.”

He continues: “There's enormous pressure to do things faster, better, quicker, cheaper. In today's world, there's much more information available to employees about the quality of experience in other businesses, making talent exponentially more mobile. People won't put up with crummy jobs—they'll just leave.”

Mark's message is simple: Businesses must understand their workforce better. And to do that, they must use analytics.

³ Mark Huselid spent more than 20 years at Rutgers University and the last 2 years at Northeastern University. In addition, he has been a visiting faculty member and has taught at schools and universities around the world to help in developing the next generation of HR leaders.

The Future of Work

Workforce analytics is most relevant when we consider the way the world of work will change in the future. Although firm predictions are difficult, some trends have their foundations in today's reality. According to the Global Consortium to Reimagine HR, Employment Alternatives, Talent, and the Enterprise (CHREATE), five fundamental forces are driving change for the future world of work:

- Social and organizational reconfiguration
- An all-inclusive global talent market
- A truly connected world
- Exponential technology change
- Human–automation collaboration

“Over the next 10 years, we will see work liberated from the idea of a job. Work will be disaggregated and re-combined in ways that better suit employers and employees.”

—John Boudreau, Professor of Management and Organization, and
Research Director of the Center for Effective Organizations,
University of Southern California

In a 2014 CHRO study undertaken by IBM's Institute for Business Value, 66 percent of C-suite executives said their organizations rely on third-party providers for contingent workers, 57 percent rely on alternative workforce arrangements, and 36 percent rely on crowdsourcing. The report argues that predictive analytics will be needed to make more accurate workforce decisions as the nature of the workforce shifts.

CHREATE and the IBM CHRO study underline the importance of analytics in helping organizations succeed in this changing world, specifically in these areas:

- **The speed of change will alter the nature of work:**
 - Work will be deconstructed and analytics will be helpful in determining the parts of the work that will remain strategic and the parts that will remain peripheral to an organization's core mission.
 - Some work will become automated by robots and other machines. Analytics will help define the best workforce that becomes a mix of robots and humans.

- **Workers themselves will continue to redefine work:**
 - The number of independent workers will continue to increase, thanks to technological advances connecting people anywhere, anytime. Organizations will tap into this “gig economy” for experts to add value to work at the right place, right price, and right time. Workforce analytics should be used to understand what work is suitable for independent workers and for permanent employees.
 - Workers’ expectations will continue to drive the need for personalized services—for example, in learning, healthcare, benefits, and so on. But in addition, new services will be needed as the gig economy intensifies—for example, the need for legal advice for intellectual property (IP) for freelancers who use their IP in multiple firms concurrently.
- **The volume of data will change the nature of workforce insights:**
 - Wearables, sensors, nanotechnology, and other devices will provide incredible amounts of data for analysis. Some devices will become so small due to technological advances that they will almost disappear from view, a term described as “disappearables” in a Reuters article by Jeremy Wagstaff in April 2015. The decrease in size is expected to increase the personal desire for and usefulness of devices in the workplace.
 - As the gig economy builds, the growing associated data will help redefine a worker’s reputation based on information about the gigs undertaken and related endorsements about the value of the work.

It’s a new world of work. Ian Bailie of Cisco summarizes this well: “It’s about understanding the skills and capabilities of the internal workforce; dealing with the new gig economy, contractors, and freelancers, and understanding their skill set; getting better at moving people around the organization; and enabling them to build careers and their own personal brands. This will become a dataset that we don’t have today.”

This is an important time for the HR profession to adapt and create momentum in the field of workforce analytics to capitalize on the changes shaping the future world of work. As Max Blumberg, founder of Blumberg Partnerships, Ltd., stresses: “You’d have to be a very brave human resources director to say you’re not taking analytics seriously.”

Summary

Workforce analytics is a discipline that is increasingly needed in organizations. This growing demand can be attributed to the following:

- The continued need for increased business value and market competitiveness
- The requirement for information and data in real time from managers and executives, to help them run their operations more efficiently and effectively
- The move toward a consumerized working environment and the provision of personalized services using workforce-related recommendation engines
- The deconstruction of traditional business models and the proliferation of the gig economy and independent workers
- The ongoing explosion of Big Data from devices such as wearables and sensors that will expand the amount of available workforce-related data

Index

A

- ABN AMRO, 94, 107, 108, 120, 123, 149, 195, 245, 259
- Accenture Strategy, 129, 138, 149, 194, 259
- accountability
- accountability hazard, 244
 - business cases, 221–222
 - success metrics, 222–223
- Adamsen, Al, 102, 113, 183, 272
- adoption of analytics,
- motivations for, 3
 - consumerization of HR, 9
 - contribution to business value, 4–6
 - democratization of HR, 7–9
 - future of work, 11–12
- ADP, 206, 243, 264
- Agoda.com, 92, 94–95, 114
- Ahold Delhaize, 32–33, 93, 235
- algorithms, social
- consequences of, 54–56
- Allen, Peter, 92, 94, 114
- analysis, conducting, 32
- analytically resistant professionals, 232–234
- analytically savvy professionals, 228–230
- analytically willing professionals, 230–232
- analytics, workforce. *See* workforce analytics
- analytics perspectives
- analytically resistant professionals, 232–234
 - analytically savvy professionals, 228–230
 - analytically willing professionals, 230–232
- analytics teams
- Six Skills for Success
 - business acumen*, 170–172
 - communication*, 179–181
 - consulting*, 173–175
 - data science*, 178–179
 - human resources*, 175–177
 - overview of*, 170
 - work psychology*, 177–178
 - size of, 182
 - skilled workers, 183–184
 - team roles, 181–185
- Andersen, Morten Kamp, 40, 65
- anticipating business needs, 181
- ANZ Bank, 159, 192, 271
- assessment
- complexity, 129–131
 - impact, 132–133
- association analysis, 49
- AstraZeneca, 29, 176, 213, 254
- Atamian, Rebecca, 16
- ATB Financial, 22, 36, 174–175
- attributes of workforce
- analytics leaders, 23–26
- attrition
- impact of, 59–60
 - implementation of
 - recommendations and, 60–63

audience, targeting, 269–271
Aviva, 22, 161, 162

awareness
data awareness, 179
internal/external, 171–172

B

A/B testing, 154
Baillie, Ian, 9, 12, 181, 231, 233, 243, 246
Bassi, Laurie, 93, 104, 105, 115, 138, 194, 273
Baylor Scott & White Health, 37, 273
Bazigos, Michael, 129, 138, 149, 194, 259
Berry, Mark, 19, 21, 193, 194, 199, 229, 230, 262
Bersin, Josh, 16, 20, 27, 104, 199, 247, 255
Bersin by Deloitte, 20, 27, 104, 199, 247, 255
Beskow, Mats, 239
bias, 55
Big Bet projects, 127
Big Data, 152–155
Blumberg, Max, 12, 71–72
Blumberg Partnerships, Ltd., 12
BNY Mellon, 89
board of directors, engaging, 105
The Boeing Company, 274
Boje, David, 254
Boudreau, John, 5, 11, 169
Brown, Alan, 71
budgets
financial frugality, 245–246
partners and, 198
Buechenschuss, Ralf, 35, 272, 277
business acumen, 170–172
business cases, 221–222

business leaders, engaging, 103–105
business needs, anticipating, 181
business question framing, 29–30
business value, HR (human resources)
contribution to, 4–6

C

Callery, John, 89–90
capability, as driver of
employee engagement, 65–66
CAPEX (capital expenditure), 165
case studies
ISS Group, 65–70
Metropolitan Police, 76–79, 111
Nielsen Holdings PLC, 59–63
overview of, 57
Rentokil Initial, 71–75
Westpac Group, 80–82
causal inference, research
design for, 44
CEO succession, 106
CGB Enterprises, Inc., 19, 21, 193–194, 229, 262
chain of command, 20
Champ, Marcus, 127, 132
change data capture (CDC), 142
change management, 174–175
Chi Wei, 280
Chidambaram, Arun, 95
chief human resources officers.
See CHROs (chief human resources officers)
CHREATE (Global Consortium to Reimagine HR, Employment Alternatives, Talent, and the Enterprise), 11, 18

CHROs (chief human resources officers), 283
roles reporting to, 20–21, 208–209
understanding views of, 102
Cisco, 9–12, 181, 231, 243, 246
clarifying
roles/responsibilities, 214–216
visualization message, 265
classification analysis, 50
click stream data, 151
cloud technology, 151, 164
cluster analysis, 51
cNPS (Customer Net Promoter Scores), 65
cognitive technology, 163, 282
collaboration, 285
communication, 35–36
analytics team
responsibilities, 118–120, 179–181
Rentokil Initial case study, 71
competitive edge, desire for, 91
complexity assessment, 129–131
complexity–impact matrix
Big Bet projects, 127
Pet Projects, 128
Quick Win projects, 126–127
Trivial Endeavor projects, 128
computer science skills, 179
concluding projects, 221
conducting analysis, 32
conflict, revealing, 259–260
consulting, 173–175, 217–221
consumerization of HR (human resources), 9
content, customizing to audience, 271
contextualization, 52
contrast, emphasizing, 268–269

Coolen, Patrick, 16, 94, 107, 108, 120, 123, 149, 195, 245, 259

Cormack, Christian, 29, 176, 213, 254

correlation analysis, 49

correlational designs, 46

costs

- cost reduction, pressure for, 93
- financial frugality, overcoming, 245–246
- opportunity cost, 133

credibility, gaining with executives, 116

culture, changing

- analytically resistant professionals, 232–234
- analytically savvy professionals, 228–230
- analytically willing professionals, 230–232
- leadership, 236
- overview of, 227–228
- training, 235
- translator role, 234

Customer Net Promoter Scores (cNPS), 66

customizing content to audience, 271

D

data analysis. *See also* data quality

- correlational designs, 46
- data governance, 152–153
- experimental design, 45
- experimental designs, 45
- longitudinal designs, 47
- objectives of, 47–48
- overview of, 43–44
- qualitative analysis, 51–52
- qualitative studies, 47
- quantitative analysis, 48–51
- quasi-experimental designs, 45–46
- research design, 44
- social consequences of, 54–56

traditional statistics versus machine learning, 53–54

unstructured data, 52–53

data awareness, 179

data complexity, 130

data dictionaries, 153

data gathering, 31–32

data governance, 152–153

data outliers, 145–146

data owners, 107

data privacy, 176–177

data quality

- A/B testing, 154
- Big Data, 152–155
- challenges
 - data outliers*, 145–146
 - inconsistent data definitions*, 146–147
 - lack of data*, 142–143
 - missing data*, 140–141
 - non-normal data distributions*, 143–145
 - outdated data*, 141–142
- data dictionaries, 153
- data types and sources
 - data from inside HR*, 148–149
 - data from outside HR*, 149
 - nontraditional data sources*, 150–151
- emerging data sources, 277–280
 - evolving technology*, 282–284
 - issues surrounding*, 280–281
- lack of data, 249
- pragmatic view of, 138
- sufficient data quality, determining, 138–139

data science, 178–179

data types and sources

- bringing together, 151
- data from inside HR, 148–149
- data from outside HR, 149
- emerging data sources, 277–280

nontraditional data sources, 150–151

data warehouses, 160–161

Davenport, Tom, xxviii, 183, 234

Davies, Clare, 76–78

decision-making approach, 210–212

defining operating model, 204

Dellala, Damien, 38, 80, 209, 213, 222

demand, seven forces of, 91–95

democratization of HR (human resources), 7–9

design

- correlational designs, 46
- experimental designs, 45
- longitudinal designs, 47
- quasi-experimental designs, 45–46
- research design, 44
- visualization, 265–269

development

- mission statements, 95–97
- requests from managers, 8
- team development, 23

devices, connected, 279

digital footprints, 279–280

Dillon, Sally, 22, 162

directors, board of, 105

distributions, non-normal, 143–145

diversity of opinion, 211

drive to achieve, 34

Duin, Eric van, 124, 271

E

Ebelle-ebanda, Antony, 91, 241, 271

Edwards, Martin, 56

effective visualization, 263

efficiency, operational, 93

Eight Step Model for Purposeful Analytics, 28, 58

emotional attachment,
creating, 257–259

employee engagement.
See engagement

Employee Net Promoter
Scores (eNPS), 66

enabling analytical thinking.
See analytical thinking,
enabling

engagement
business impact of, 65
ISS Group case study
analysis, conducting,
66–68
business impact of
engagement, 65
implementation of
recommendations,
69–70
overview of, 65

stakeholders
analytics team
responsibilities,
118–120
board of directors, 105
business leaders,
103–105
data owners, 107
executives, 115–116
finance department,
110–111
HR leaders, 102–103
legal department,
109–110
managers, 114–115
overview of, 100
planning, 120
securing support from,
101–102
SMEs (subject matter
experts), 108–109
stakeholder messaging,
117
stakeholder
responsibilities, 120
technology owners, 108
unions and works
councils, 112
workers, 113–114

eNPC (Employee Net
Promoter Scores), 66

enthusiast audiences, 270

Erickson, Tammy, 214

Ericsson, 5, 21, 87, 229, 232,
273

ethics, 176

evaluation, 36–38

Everduin, Giovanni, 153, 271

evolving technology, 282–284

execution of projects, 218–220

executives
engaging, 115–116
executive presentations,
272–273

experimental designs, 45

exploratory analysis, 48

external awareness, 171–172

extreme collaboration, 285

F

FA (factor analysis), 50

failure of analytics, reasons for,
40–42

fairness-aware data mining,
54–55

feedback, 207

Feffer, Mark, 9

Ferris, Gerald, 129–130, 171

finance department, engaging,
110–111

financial frugality, overcoming,
245–246, 251

financial literacy, 171

Fink, Alexis, 22, 25, 37

focus of workforce analytics,
16–17

FORT framework, 207

framing business questions,
29–30

Frampton, Jonathon, 37, 273

Friedman, Jerome, 56

frugality, overcoming,
245–246, 251

funding, 110

G

gathering data, 31–32

genetic testing, 280

Getinge Group, 43, 192, 261

gig economy, 12, 18

GlaxoSmithKline, 36

Global Consortium to
Reimagine HR, Employment
Alternatives, Talent, and the
Enterprise (CHREATE),
11, 18

“good enough” data, 138–139

governance, 152–153
operating model
decision-making
approach, 210–212
HR data, working with,
205–208
reporting structure
optimization, 208–209
Rentokil Initial case study, 71

graphics, 263–264

Green, David, 57

Groupon, 102, 147, 228,
231, 248

H

Handbook of Industrial and
Organizational Psychology
(Lee), 52

Hartmann, Peter, 43, 192, 261

Hastie, Trevor, 56

health and wellness, requests
from managers, 8

Herleman, Hailey, 160

hesitancy, overcoming, 246–251

HIPPO principle, 100

in-house teams, 189–191, 196

HR (human resources)
changing nature of, 7
consumerization of, 9
contribution to business
value, 4–6
data warehouses, 160–161

democratization of, 7–9
 future of, 10
 hesitancy, overcoming, 246–251
 HR leaders, engaging, 102–103
 lack of skills in, 242
 perception of, 199–200
 requests from managers, 8–9
 skills of, 175–177
 as strategic business partner, 243

HR analytics. *See* workforce analytics

HR business partners (HRBPs), 37

HR data, working with, 205–208

HRBPs (HR business partners), 37

HRIS (Human Resources Information System), 141–142, 160

HRIT (Human Resources Information Technology), 108

human capital, 16

human capital analytics. *See* workforce analytics

Human Resources Information System (HRIS), 141–142, 160

Human Resources Information Technology (HRIT), 108

humanistic concerns, 93

Huselid, Mark, 3, 10, 170, 241–242

hypothesis building, 30–31, 52, 173

IaaS (Infrastructure as a Service), 165

IBM, 11, 52, 57, 112, 150, 157, 278

impact, 55

impact assessment, 132–133

impartiality, 264

impasse, resolving, 211

implementation, 36–38
 implementation complexity, 131
 operating model
 consulting approach to project management, 217–221
 role/responsibility clarification, 214–216
 team structure, 213–214
 of recommendations, 119
 risks, 249–250

inconsistent data definitions, 146–147

industrial psychology, 177–178

Infrastructure as a Service (IaaS), 165

initiating projects, 217–218

iNostix by Deloitte, 20, 234, 244–245

insights, 17, 32–33

inspiration, 24

integration, responsibility for, 21

Intel, 22, 25, 37

internal awareness, 171–172

international HR, 176

Internet of Things, 18, 150

interpretation of results, 52

interviewing project sponsors, 90–91

ISS Group case study, 65–70
 analysis, conducting, 66–68
 business impact of engagement, 65
 implementation of recommendations, 69
 overview of, 65

iterative approach, 72–74

J

Jover, Placid, 110, 214, 220

JPMorgan Chase & Co. 89, 92, 119, 231, 250

K

Karia, Akash, 256

key performance indicators (KPIs), 6, 125

Klavohn, Travis, 16

Klinghoffer, Dawn, 177, 284

Knaflic, Cole Nussbaumer, 263

KPIs (key performance indicators), 6, 125

kurtosis, 143–145

L

lack of data, 142–143, 249

Landstinget Västmanland, 239

Lashyn, Terry, 22, 36, 42, 175

Lawler, Ed, 16

Layne, Tracy, 6, 227

leadership
 attributes of, 23–26
 board of directors, 105
 building analytics culture with, 236
 business acumen of, 22–23
 business leaders, 103–105
 chain of command, 20
 data owners, 107
 HR leaders, 102–103
 requests from managers, 8
 responsibilities of, 20–21
 SMEs (subject matter experts), 108–109
 technology owners, 108

leasing technology, 165–166

Lee, Tomas, 52

legal appropriateness of data sources, 281

legal department, engaging, 109–110

Levenson, Alec, 5, 28–29

Lever Analytics, 137, 194

linguistic analysis, 280

LinkedIn, 172, 203, 208

listening

- analytics team
- responsibilities, 118–120
- to project sponsors, 90–91

London Metropolitan Police.
See Metropolitan Police case study

longitudinal designs, 47

M

machine learning, 53–54,
162–163

Mackaluso, Eric, 206, 243, 264

Malo, Salvador, 5, 21, 87, 174,
229, 232, 273

management, responsibility
for, 21

managers

- engaging, 114–115
- manager requests, 8–9

marketing, 180

Marritt, Andrew, 104, 109, 112,
194, 206, 253

master audiences, 270

Mathur, Piyush, 59–63

maturity models, 285–286

McBassi & Company, 93, 104,
105, 115, 138, 194, 273

McCall, Morgan, 26

McGraw Hill Financial, 91

messages

- call to action, 260–262
- stakeholder messaging, 117

metadata of website activity,
151

methodology, 28. *See also* case studies

- analysis, conducting, 32
- business question framing, 29–30
- communication, 35–36
- data gathering, 31–32
- hypothesis building, 30–31
- implementation/evaluation, 36–38

insights, revealing, 33–34

recommendations, 33–34

metrics, 222–223

Metropolitan Police case study,
76–79, 111

- analytical insights, 77–79
- challenges, 76
- implementation of recommendations, 79
- overview of, 76

Microsoft, 177, 284

Millner, Dave, 278

missing data, 140–141

mission statement

- developing, 95–97
- operational model and, 205
- technology and, 158–159

model (analytics), 28

failure and, 40–42

methodology

- analysis, conducting*, 32
- business question framing*, 29–30
- communication*, 35–36
- data gathering*, 31–32
- hypothesis building*, 30–31
- implementation/evaluation*, 36–38
- insights, revealing*, 33–34
- recommendations*, 33–34

Morgan Stanley, 152, 187,
242, 253

motivation, as driver of
employee engagement, 65–66

N

Nagy, Mihaly, 113, 200

National Storytelling Network,
254

negotiating scope of analytics,
95

Nestlé, 35, 272, 277

new data sources, 277–280

evolving technology,
282–284

issues surrounding,
280–281

newcomer audiences, 271

Nicholas, Ben, 36

Nielsen, Adam Chini, 116

Nielsen Holdings PLC case
study, 59–63

analysis of attrition,
60–62

impact of increasing
attrition, 59–60

implementation of
recommendations, 63

overview of, 59

non-normal data
distributions, 143–145

nontraditional data sources,
150–151

Nordea Bank, 116

O

Obereigner, Andre, 102, 147,
228, 231, 236, 248

Oest, Martin, 76, 111

O'Hanlon, Peter, 137, 194

O'Keefe, Ian, 88, 92, 119, 231,
250

O'Neill, Cathy, 54

on-premise technology, 164

open standards, 282

operating model

- accountability
- business cases*, 221–222
- success metrics*, 222–223

chain of command, 20

defining, 204

governance

- decision-making approach*, 210–212
- HR data, working with*, 205–208
- reporting structure optimization*, 208–209

implementation
consulting approach to project management, 217–221
role/responsibility clarification, 214–216
team structure, 213–214
 linking to strategy, 205
 operational efficiency, 92
 opportunity cost, 133
 optimizing reporting structure, 208–209
 organizational psychology, 178
 OrganizationView, 104, 109, 112, 206, 253
 Orwell, George, 258
 outcome metrics, 223
 outdated data, 141–142
 outliers, 145–146
 outsourcing, 193–197
 overcoming resistance. *See* resistance, overcoming
 owners
 data owners, 107
 technology owners, 108
 owning technology, 166

P

PaaS (Platform as a Service), 165
 partners
 advantages of, 188
 budget considerations, 198
 factors in selecting, 197–200
 outsourcing, 193–197
 in-sourcing, 191–193, 196
 Parveen, Sofia, 116
 Pascal, Blaise, 273
 PCA (principal components analysis), 50
 Pearson's product-moment correlation, 49
 people analytics. *See* workforce analytics

perception of HR, 199–200
 personalization, workforce, 9–10
 perspectives
 analytically resistant professionals, 232–234
 analytically savvy professionals, 228–230
 analytically willing professionals, 230–232
 Pet Projects, 128
 Pfizer, 95
 Phillips, Katherine, 211
 Pixar, 257
 planning, 17, 120
 Platform as a Service (PaaS), 165
 politics
 political astuteness, 171
 political complexity, 129–130
Politics in Organizations (Ferris), 171
 PostNL, 124, 271
 Pratt, Michael, 52
 prediction, 49
Predictive HR Analytics (Edwards), 56
 preparation
 BNY Mellon case study, 89–90
 overview of, 88–90
 project sponsors, interviewing, 90–91
 scope of analytics, 95
 Seven Forces of Demand, 91–95
 vision and mission statement, 95–97
 presentations, 180
 executive presentations, 272–273
 presentation medium, 265–266
 presenters, selecting, 272
 simplicity, 273–274
 presenters, selecting, 272

principal components analysis (PCA), 50
 priorities, 243–245
 privacy, 176–177
 Privacy Shield Frameworks, 206
 problem definition, 173
 project management, 174
 consulting approach to p, 217–221
 project conclusion, 221
 project execution, 218–220
 project initiation, 217–218
 project sponsors, 38–40
 complexity-impact matrix, 129–131
 interviewing, 90–91
 projects
 complexity-impact matrix impact assessment, 132–133
 project management, 174
 consulting approach to p, 217–221
 project conclusion, 221
 project execution, 218–220
 project initiation, 217–218
 project sponsors, 38–40
 complexity-impact matrix, 129–131
 interviewing, 90–91
 Quick Win projects
 definition of, 123–124, 126–127
 identifying, 124–125
 timing, 132
 proximal metrics, 223
 psychology, 177–178
 purpose, as driver of employee engagement, 65–66
 purposeful analytics
 case studies
 ISS Group, 65–70
 Metropolitan Police, 76–79
 Nielsen Holdings PLC, 59–63

overview of, 59
Rentokil Initial, 71–75
Westpac Group, 80–82
 failure of, 40–42
 methodology for, 28, 58
analysis, conducting, 32
business question framing, 29–30
communication, 35–36
data gathering, 31–32
hypothesis building, 30–31
implementation/evaluation, 36–38
insights, revealing, 33–34
recommendations, 33–34
 project sponsors, 38–40

Q

qualitative analysis, 51–52
 qualitative studies, 46–47
 quality. *See* data quality
 quantitative analysis, 48–51
 quantitative skills, 178–179
 quasi-experimental designs, 45–46
 Quick Win projects
 complexity-impact matrix, 125–126
 definition of, 123–124, 126–127
 identifying, 124–125

R

RACI responsibility matrix, 214–216
 Rasmussen, Thomas, 92, 99, 102, 104, 118, 191, 213, 229, 231, 273
 real-time model updating, 283
 recognition, 207
 recommendations
 determining, 33–34
 implementation of, 119

recruitment, 8
 reduction analysis, 50
 reduction of costs, pressure for, 93
 regression analysis, 62
 regulatory requirements, 92
 relationship power, 40
Rentokil Initial case study, 71–75
 implementation of recommendations, 74–75
 iterative approach, 72–73
 overview of, 71
 variability in sales performance, 71
 reporting, 17
 real-time reporting, 283
 reporting structure, optimizing, 208–209
 technology, 161–162
 representation, responsibility for, 21
 requests from managers, 8–9, 92–93
 research design, 44, 178
 resistance, overcoming, 239–240
 financial frugality, 245–246, 251
 HR hesitancy, 246–251
 stakeholder skepticism, 240–245, 250–251
 responsibility matrix, 214–216
 responsibility/role clarification, 214–216
 restraint, 263
 retention analysis, Nielsen Holdings PLC case study
 analysis of attrition, 60–62
 impact of increasing attrition, 59–60
 implementation of recommendations, 63
 overview of, 59
 return on investment (ROI), 37, 132
 revealing conflict, 259–260

revealing insights, 33–34
 robotics, 18
 ROI (return on investment), 37, 132
 roles (team), 181–185
 leadership, 236
 role/responsibility clarification, 214–216
 training, 235
 translator, 234
 Ryan, Jackie, 157, 160

S

S&P Global, 91, 241
 SaaS (Software as a Service), 164–165
 Salapatas, Kanella, 159, 192, 271
 sales growth, *Rentokil Initial* case study
 implementation of recommendations, 74–75
 iterative approach, 72–73
 overview of, 71
 variability in sales performance, 71
 scene, setting, 256–257
 scientist audiences, 270
 scope, agreeing on, 95
 segmentation analysis, 50
 self-service technology, 282–283
 Seligman, Martin, 93
 sensitive personal information (SPI), 205
 setting the scene, 256–257
 Seven Forces of Demand, 91–95
 Shami, Sadat, 52, 112
 Shapiro, Jeremy, 152, 187, 242, 253
 sharing technology, 165
 Shell, 92, 99, 102, 104, 118, 191, 213, 229, 273
 Shutterfly, Inc., 6, 227

- similarities, emphasizing, 268–269
- simplicity, 263, 273–274
- Six Skills for Success
 - business acumen, 22–23, 170–172
 - communication, 179–181
 - consulting, 173–175
 - data science, 178–179
 - future of, 284–285
 - human resources, 175–177
 - overview of, 170
 - work psychology, 177–178
- “sixth sense”, 176
- size of teams, 182
- skepticism, overcoming, 240–245, 250–251
- skewness, 143–145
- skills
 - Six Skills for Success
 - business acumen*, 22–23, 170–172
 - communication*, 179–181
 - consulting*, 173–175
 - data science*, 178–179
 - future of*, 284–285
 - human resources*, 175–177
 - overview of*, 170
 - work psychology*, 177–178
 - skill complexity, 130
 - skilled workers, 183–184, 249
- SMEs (subject matter experts), engaging, 108–109
- Smeyers, Luk, 20, 234, 244
- social consequences of algorithms, 54–56
- social impact of data sources, 281
- social network data, 150
- societal impact of stress, 80–81
- Software as a Service (SaaS), 164–165
- Sole, Deborah, 254
- solution development, 174
- Sonnenberg, Mariëlle, 101, 110, 148, 208, 221, 236, 247
- in-sourcing, 191–193, 196
- SPI (sensitive personal information), 205
- sponsors, 38–40
- stakeholder engagement
 - analytics team
 - responsibilities, 118–120
 - board of directors, 105
 - business leaders, 103–105
 - data owners, 107
 - executives, 115–116
 - finance department, 110–111
 - HR leaders, 102–103
 - legal department, 109–110
 - managers, 114–115
 - overview of, 100
 - planning, 120
 - securing support from, 101–102
 - SMEs (subject matter experts), 108–109
 - stakeholder management, 175
 - financial frugality*, 245–246, 251
 - HR hesitancy*, 246–251
 - stakeholder skepticism*, 240–245, 250–251
 - stakeholder messaging, 117
 - stakeholder responsibilities, 120
 - technology owners, 108
 - unions and works councils, 112
 - workers, 113–114
- stakeholder management
 - financial frugality, 245–246, 251
 - HR hesitancy, 246–251
 - stakeholder skepticism, 240–245, 250–251
- stakeholder skepticism, overcoming, 240–245, 250–251
- Stamford Global, 113, 200
- Standard Chartered Bank, 132
- standards, open, 282
- Stanton, Andrew, 257–258
- storytelling, 179–180
 - as agent for change, 254
 - audience, targeting, 269–271
 - definition of, 254
 - executive presentations, 272–273
 - overview of, 253
 - presenters, selecting, 272
 - principles for, 255
 - role in workforce analytics, 254–255
 - simplicity, 273–274
 - techniques, 256
 - call to action*, 260–262
 - conflict, revealing*, 259–260
 - emotional attachment, creating*, 257–259
 - scene, setting*, 256–257
 - time management, 271
 - visualization
 - creating*, 264–269
 - effective visualization*, 263
 - graphics*, 263–264
 - testing*, 269
- Storytelling with Data* (Knaflic), 263
- Strategic Analytics* (Levenson), 29
- strategic business partner, HR (human resources) as, 243
- strategy, linking operating model to, 205
- stress, societal impact of, 80–81
- style (visualization), 267
- subject matter experts (SMEs), engaging, 108–109
- subscribing to technology, 165–166
- success, skills for, 284–285
 - business acumen, 170–172
 - communication, 179–181
 - consulting, 173–175
 - data science, 178–179

human resources, 175–177
 overview of, 170
 Westpac Group case study, 209
 work psychology, 177–178

success metrics, 222–223
 tips for, 220–221

succession (CEO), 106

sufficient data quality, determining, 138–139

Svegaard, Simon, 65–66, 90, 261

T

talent, definition of, 16

talent analytics. *See* workforce analytics

Talent Strategy Institute, 102, 113, 183, 272

talent supply chain, 181

Tanfeeth, 153, 271

teams, 188–189
 development, 24
 in-house, 189–191, 196
 outsourcing, 193–197
 partners
advantages of, 188
budget considerations, 198
factors in selecting, 197–200
outsourcing, 193–197
in-sourcing, 191–193, 196
 role/responsibility clarification, 214–216

Six Skills for Success
business acumen, 170–172
communication, 179–181
consulting, 173–175
data science, 178–179
human resources, 175–177
overview of, 170
work psychology, 177–178

size of, 182

skilled workers, 183–184, 249

in-sourcing, 191–193, 196

stakeholder engagement responsibilities, 118–120

structure of, 213–221

team roles, 181–185

technology
 cognitive technology, 163
 complexity, 131
 evolving technology, 282–284
 HR data warehouses, 160–161
 HRIS (Human Resources Information System), 160
 machine learning, 162–163
 overview of, 157
 owners, 108
 owning, 166
 on-premise versus cloud, 164
 reporting technology, 161–162
 sharing, 165
 subscribing to, 165–166
 vendor relationships, 165–167
 vision and mission, 158–159
 visualization technology, 163

TED Talks Storytelling: 23 Storytelling Techniques from the Best TED Talks (Karia), 256

testing
 A/B testing, 154
 visualizations, 269

thinking. *See* analytical thinking, enabling

third-party objectivity, 200

thought, capacity for, 23

Tibshirani, Robert, 56

time management, 271

time to value, 195

timing, 132

tools, 249

top-down requests, 92–93

traditional statistics, 53–54

training, building analytics culture with, 235

translator role, 234

transparency, 207

Trivial Endeavor projects, 128

Tufte, Edward, 263–264

U

Unilever, 110, 214, 220

unions, engaging, 112

unstructured data, 52–53

U.S. National Storytelling Network, 254

V

validity of data sources, 280–281

vendor relationships, 165–167

vignettes
 Allen, Peter, Agoda.com, 94
 Andersen, Morten Kamp, proacteur, 40
 Bailie, Ian, Cisco, 181
 Berry, Mark, CGB Enterprises, 262
 Callery, John, BNY Mellon, 89
 Champ, Marcus, Standard Chartered Bank, 127
 Coolen, Patrick, ABN AMRO, 195
 Dellala, Damien, Westpac Group, 209
 Dillon, Sally, ANZ Bank, 162
 Duin, Eric van, PostNL, 124
 Everduin, Giovanni, Tanfeeth, 153
 Fink, Alexis, Intel, 25
 Huselid, Mark, Northeastern University, 10
 Jover, Placid, Unilever, 220
 Klinghoffer, Dawn, Microsoft, 177
 Layney, Tracy, Shutterfly, Inc., 6
 Malo, Salvador, Ericsson, 232

Nielsen, Adam Chini, Nordea, 116
 Obereigner, Andre, Groupon, 248
 Oest, Martin, True Picture Europe Ltd., 111
 Parveen, Sofia, Nordea, 116
 Rasmussen, Thomas, Royal Dutch Shell, 191
 Salapatas, Kanella, ANZ Bank, 159
 Smeyers, Luk, iNostix by Deloitte, 244
 Sonnenberg, Mariëlle, Wolters Kluwer, 148
 Voorn, Bart, Ahold Delhaize, 235
 White, Rebecca, LinkedIn, 172
 Wright, Patrick, University of South Carolina, 106
 Yost, Paul, Seattle Pacific University, 274

vision

developing, 95–97
 operational model and, 205
 technology and, 158–159

The Visual Display of Quantitative Information (Tufte), 263

visualization

creating, 264–269
 effective visualization, 263
 graphics, 263–264
 technology, 163, 180
 testing, 269

Voorn, Bart, 32–33, 93, 235

W

Westpac Group case study, 80–82

analysis, conducting, 81
 implementation of recommendations, 82
 overview of, 80
 societal impact of stress, 80
 success, principles of, 209

White, Rebecca, 172, 203, 208

willingness to develop others, 24

Wolters Kluwer, 101, 110, 148, 208, 221, 236, 247

work

future of, 11–12
 work psychology, 177–178

workers engagement, 113–114

workforce analytics leaders
 attributes of, 23–26
 business acumen of, 22–23
 chain of command, 20
 responsibilities of, 20–21

“workforce of one”, 9

workforce personalization, 9–10

workforce planning, 5

works councils, engaging, 112

Wright, Patrick, 4, 106

writing mission statement, 30–31, 95–97

written communication, 180

X-Y-Z

Yost, Paul, 254, 260, 274

Zak, Paul, 254

Zull, James, 263