Optimize Your Greatest Asset — Your People

How to Apply ANALYTICS to BIG DATA to Improve Your Human Capital Investments

GENE PEASE

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My father, Gene A. Pease Sr., was the most influential person in my life, both professionally and personally. He was a World War II veteran, and upon returning from the war started a company in his partner's mother's garage while pursuing a college degree at night. He successfully ran his company for over 30 years while juggling being a terrific husband and helping to raise four children. He taught me the virtue of hard work and the value of ethics, and he showed me how entrepreneurs persevere in spite of the odds. Although he passed away too young, I use the lessons I learned from him every day. I love and miss you, Dad.

When you are an entrepreneur, you will experience many, and I mean many, ups and downs in attempting to take a dream and turn it into a reality. You will also understand how important support from your family assists you getting through those many down days. The commitment to be an entrepreneur is stressful for all involved. My partner, Pamela Pease, has supported my career for many years. She is my lifelong confidant, psychiatrist, and mentor. My two daughters, Tiffany and Heather, have wisdom beyond their years and consistently give me advice and perspective that surprises me. Thank you for your love and support. You make me strive to be the man our dog Bailey thinks I am.

I have been very fortunate to have grown up in a close-knit family that practices unconditional love. My mother, Deanne, the matriarch of the family, has taught us too many lessons for one book. My sister, Dr. Susan Instone, provides her younger siblings wisdom. My brothers, Jeff and Scott, are a joy to be around, especially where there's beer and a band. Thank you for your continued support and encouragement.

—Gene A. Pease Jr.

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Foreword

I am always excited for the start of a new year—it is a time of reflection for the year just past and an opportunity to look forward to the year ahead. I am an optimistic person by nature, so this reflective process is always filled with promise, hoping to learn from my experiences over the previous 12 months. I felt especially optimistic approaching 2015; my personal life is great (wife, Molly; daughters, Regan and Maggie; and son, Aidan, are all healthy, happy, and doing well) and the horizon for my profession has perhaps never been brighter. After almost 20 years in the workforce analytics and planning industry, the marketplace was FINALLY accelerating; the discussions have moved from whether organizations *should* invest in analytics to *how* to optimize investments.

The industry has been on quite a journey the past few decades. Many point to Dr. Jac Fitz-enz starting the industry with human capital benchmarking programs and the launch of the Saratoga Institute. This work was enhanced through innovative consulting, benchmarking, and technology firms across the globe. The contributors were many, including InfoHRM (Peter Howes and Anastasia Ellerby from Australia) and the larger professional services firms (Mercer, Deloitte, AonHewitt, etc.) all the way to combinations of the two (PwC/Saratoga). I believe the growth of the industry started an initial period of acceleration, and acceptance, as the software firms started to get into the game. Large, global enterprise resource planning (ERP) software firms such as PeopleSoft, SAP, and Oracle included benchmarking, metrics, and dashboarding capabilities into their

software platforms. These innovations, and the capable software sales teams, made HR dashboards a must-have tool for every human resources department.

The growth capabilities in the large ERP software platforms also contributed to the growth of the performance/talent management software vendor community and the rise of cloud computing. These new cloud-based firms such as SuccessFactors, Taleo, Kenexa, and Cornerstone OnDemand brought new capabilities to the marketplace. The industry started to move from HR Metrics and benchmarks to more advanced analytics and concepts around workforce planning. The ability to aggregate data in the cloud across organizations brought a whole new dimension to the analysis that could be conducted, produced, and delivered to C-suite executives. These were exciting times as the promise of finally linking human capital to business results appeared to be achievable. And it was! The industry saw leading companies such as Capital One, The Home Depot, Starbucks, Target, Ameriprise Financial, Avaya, and others influencing capital decisions within their respective organizations. It was not unusual to see many companies presenting findings, results, and program strategies at conferences across the globe and many companies establishing dedicated workforce analytics and planning centers-of-expertise (COEs).

The growth of COEs represents a significant achievement for our industry. Organizations were recognizing the importance of human capital analytics and workforce planning and were willing to invest capital (human and financial) in this capability. Many of the COEs reported directly to chief human resources officers (CHROs) and had direct access to the C-suite at large. HR was starting to become more quantitative in its capabilities, with statisticians, industrial-organizational psychologists, and business operations executives migrating into COEs and HR executive suites. COEs were starting to drive the innovation expected from the technology vendor community, pushing the

boundaries of existing vendor capabilities. And then the HR technology community had another merger-and-acquisitions wave as the talent management vendors were swallowed up by the ERP vendors (SAP/SuccessFactors, Oracle/Taleo, IBM/Kenexa) and pure-play cloud ERP firms emerged with vendors like Workday. This consolidation of the HR technology industry did not drive the innovation in the analytics industry—the growth of COEs was the largest contributing factor to the growth we are seeing in the industry today.

This brings us to today, and I am so excited and optimistic for our industry. The growth and innovation of our industry is now driven by practitioners—the same practitioners that have launched and run COEs for the better part of a decade. These practitioners have taken the next step in the evolution of workforce analytics and planning and have moved to predictive analytics capabilities. COEs are harnessing the power of big data, leveraging machine learning functionality and providing insights to business leaders that were never before possible. In many ways, COEs serve as the R&D function for today's HR technology community and for their own organizations!

I was excited to be approached by Gene Pease regarding participating in the writing of his latest book. Gene and I are working together at Vestrics, provider of the industry's leading predictive analytics platform. Vestrics joins the companies I mentioned above in industry innovation and specifically in placing predictive analytics technology in the hands of talent professionals. Vestrics has been a thought leader in this work, and I was excited that, with his third book, Gene was going to formally document, and share, the innovation taking place in today's predictive analytics marketplace.

This book is not theory; the examples cited are real-world experiences and examples of some of the globe's leading companies tackling their thorniest business issues. The examples should serve as a template for organizations looking to analytics, a call

to action for organizations struggling with their own efforts, and a confirmation of success for those already leading the charge.

I remain optimistic on the future of our industry—and hope you are as excited as I am for the next chapters of learning and growth that remain ahead.

Brian Kelly
President, Vestrics

Preface

In 2005, I went to the Masie Conference in Florida. It was the first industry conference I had attended since we started Capital Analytics (now Vestrics) the year before. The conference was very interesting with presentations on a wide variety of topics related to learning. However, there were very few presentations at the conference related to measuring and evaluating learning. Those that discussed measurement focused on how to create and deploy better surveys. Among over 100+ scheduled presentations, there was one breakout session on the topic of the return on investment (ROI) of training investments. Approximately 50 people showed up for the discussion, so we put our chairs in a large oval in a banquet room. I was very excited to participate in what I considered the most important topic of the conference. A professor from one of the East Coast business schools kicked off the discussion. The attendees represented middle to senior management learning executives from some of the world's largest and best-known corporations, as well as representatives from many prestigious universities. I was eager to hear from the industry as my team had just started to apply advanced analytics to measure training programs.

For the first 30 minutes or so, one executive after another stated that you can't measure learning investments because people are too complicated and organizations are too complex. Generally, the group believed that measuring ROI was a waste of time and had no value. We had formed Capital Analytics knowing that statistics were being used in many disciplines—drug trials, actuarial work, supply chain optimization, and many others.

Even marketing (which had long been thought of as an art form) was beginning to apply statistics to better understand the effectiveness of their investments. What's the old saying? I knew that 50 percent of my marketing budget was wasted; I just didn't know which 50 percent.

The discussion was hard for me to believe. And it went on and on. I couldn't stand it any longer and meekly raised my hand. When called upon, I stated that I strongly disagreed with their opinions. Our scientists (from Duke University, by the way!) were applying statistical work to learning investments. This work was enabling us to see insights into the investments that qualitative methods could not uncover.

You would have thought I was from Mars with the violent reaction to my comments. The next half-hour turned into a free-for-all of 50 against 1 (me). The argument both discouraged and energized me. I was discouraged to learn that the learning profession was so far behind in thinking about how to link investments to business outcomes. It discouraged me enough that I didn't attend another industry conference for the next three years.

However, in spite of this beat down, I knew this work could be done, and it energized me to show the industry that it could be done. So we quietly stuck to the work over the next 10 years and, along with others, helped shepherd advanced analytics into the human capital profession. Look at where we are a decade later. There is significant proof that applying analytics and understanding how investments are working significantly improves business outcomes. We now use predictive analytics to help navigate rapidly changing work environments. Big data allows us to capture both structured and unstructured data and turn it into information that enables us to make better-informed decisions.

I have co-authored two books on how to design and deploy advanced analytics for human capital investments. I was fortunate to have co-authored those books with a very talented group of experts in the field of measurement. The books were based

primarily on the work and numerous mistakes we made, as we built on decades of previous work in the industry and added predictive analytics into the mix. These books focused on HOW to get started and do the work. This new book focuses more on WHY we should be doing the work every day.

As significant research shows, Human Resources (HR) is playing catch-up with adopting analytics. Some of us estimate the HR profession is about where marketing was a decade ago regarding the use of analytics. According to Bersin by Deloitte, only 14 percent of human resource departments have an analytics function. This compares to 77 percent of operations departments having an analytics function, 58 percent in sales, and 56 percent in marketing. With all the evidence we have on the value of analytics, HR has to do better.

There is some extraordinary work going on in organizations where HR analytics is being practiced. In addition to including case studies in the appendices of this book, I have invited some practitioners to give you their thoughts and lessons learned in their measurement journey. I am hopeful their stories and advice will help you overcome any obstacles you or your organization may have and inspire you to join the HR analytics movement. If you do, I promise you won't regret it.

Gene Pease

Acknowledgments

This is the third book I have authored, and Sara Jensen has collaborated with me on every one. She is a first-rate researcher and editor and all around a good person. Sara in many cases turns my gibberish into English. You are a pleasure to work with, Sara—thank you. Mia Heckendorf also has been part of our team for each book. Mia deserves a special thank you for keeping me organized and on schedule. Without these two incredible, talented women, I would not be able to run a company full time and share our research with the industry. Sincere thanks, ladies, for your assistance and putting up with my crazy ideas and unpredictable schedule.

For the past decade, I have been blessed to have the good fortune of working with a tremendous amount of talented colleagues at Vestrics (formerly Capital Analytics). Thank you for your inspiration, mentoring, and collaboration. Dr. Phil Buchanan, Barrie Trinkle, and Dr. Andy Collins have been my investment partners this entire journey and deserve a special thank you. Thank you, also, to Dr. Joan Troy-Ontjes, who has also been my business partner since the beginning.

I have known Brian Kelly for over five years, and recently he joined Vestrics as our first president. It was time for me to hand some of the day-to-day responsibilities over to someone, and I couldn't be more pleased that he shared our vision and decided to join. Thank you, Brian, for writing the Foreword.

Stacey Boyle, PhD, deserves credit for coordinating the Vestrics/ROI Institute research project and for her contributions to Chapter 3. It was also a pleasure to collaborate with Jack and

Patti Phillips, specifically on that project and other initiatives our two organizations are working on. John Zonneveld, thank you for your continued collaboration and contributions to our work.

I also want to acknowledge a few pioneers who have inspired me in this journey of optimizing human capital investments: Donald Kirkpatrick, Jack Phillips, Jac Fitz-enz, Tom Davenport, Ed Lawler, John Boudreau, Mike Echols, Jeffrey Pfeffer, and Marshall Goldsmith.

I offer hearty thanks to the executives who contributed their thoughts, sprinkled throughout this book. I hope they offer some context and inspiration that with conviction, advanced analytics can be applied to human capital investments, and significant insights can be found. Thank you, in no specific order:

AD Detrick—Learning measurement consultant, Xerox

Amit Mohindra—Vice president, talent management and diversity, McKesson

Brad Pearce—Vice president, analytics manager, Wells Fargo

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RJ Milnor—Manager, planning and analytics, Chevron

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CHAPTER 1

The Need for Measurement in a Changing Environment