



DIGITAL DISCIPLINES

Attaining Market Leadership via the
Cloud, Big Data, Social, Mobile, and
the Internet of Things

Joe Weinman

WILEY

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THE CLOUD, BIG DATA, SOCIAL,
MOBILE, AND THE INTERNET OF
THINGS**

Joe Weinman

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“Dedicated to Mom and Dad”

Foreword

Marketplace success is much sought after, but hard to achieve. In most industries, only a handful of firms manage to outperform the majority of their contenders. Their shining results make them stand out—in terms of customer appeal, financial results, or growth prospects. Yet even they are subject to decline in a turbulent world where customer power and buyers' demands are mounting relentlessly.

Attaining market leadership is no sinecure. This was already evident some 20 years ago in the research that led to my coauthored book *The Discipline of Market Leaders*, a #1 bestseller that was published in 18 languages. The fundamental and lasting truth exemplified by the market-leading companies featured in that work, as well as the many outperformers I have studied since, is that they succeeded by not being all things to all people. Instead, they developed and honed the discipline to deliver unsurpassed value to particular customer segments on just those dimensions most pertinent to these customers—such as best total cost, best solutions, or best products. On top of that, they recognized the imperative to provide better value year after year in order to sustain their appeal to ravenous and switch-prone customers—whether through faster, cheaper, and better offerings, special treatment, or otherwise.

Then as well as now, customers want more—and they want to be delighted and surprised. Today nothing has more power to surprise than the digital juggernaut that is transforming marketplaces around the world.

In my research 20 years ago, the Internet barely registered as a crucial component of market leadership. The word

internetworking appeared just once in my book, and the term *digital* did not come up at all. How things have changed. Today, technology is a pervasive strategic force in any market-leading company that I know, and is getting recognized as such in a rapidly growing number of other firms. In light of that, it is no surprise that as of April 2015, the world's highest-ranking companies by stock market capitalization were Apple and Google, with Microsoft, Facebook, Oracle, and Amazon not far behind, and that most of the fastest-growing enterprises can be found in the digital field.

Considering the rampant growth and importance of digital capabilities, Joe Weinman's *Digital Disciplines* could not be more timely. The immense merit of his work lies in illuminating how the dizzying array of current and emerging digital technologies are shaping and transforming the ways that companies create better customer value and, hence, attain market leadership. His insights and case studies provide a blueprint for companies of all sizes in all industries to upgrade their strategies so as to compete effectively in the digital era. The connection of his four digital disciplines with the enduring disciplines of market leaders that were outlined in my earlier book is uncanny. To me, *Digital Disciplines* shows how technology is super-charging the way customer value gets created. Weinman, in effect, is putting my original disciplines on steroids.

Digital Disciplines provides rich and interesting detail as to technology's potential and impact on customer strategy. Even with a pretty good grasp of the subject matter, I found the book eye-opening, especially in terms of the multitude of possibilities it covers that are worth exploring, and the dangers that could befall those who do not fully appreciate the necessities of the digital era.

Fred Wiersema
Customer Strategist, Chair of the B2B Leadership
Board,
Institute for the Study of Business Markets at Penn
State, and
coauthor of the top-selling *The Discipline of Market
Leaders*

Preface

In 1993, two management consultants named Michael Treacy and Fred Wiersema wrote a popular *Harvard Business Review* article titled “Customer Intimacy and Other Value Disciplines.” They further detailed their insights in the best-selling *The Discipline of Market Leaders*. Based on a multiyear study of dozens of companies, they argued that to be successful, firms needed to create unique value for customers through operational excellence, product leadership, or customer intimacy.

Operational excellence focuses on developing differentiated processes, for example, those that offer lower prices or greater convenience. For example, Dell had rethought the PC business, replacing store-based channels that pushed standard make-to-stock configurations with a direct-to-consumer model for assemble-to-order products, increasing convenience while lowering price-points.

Product leadership involves leading-edge products and services. Treacy and Wiersema highlighted Johnson & Johnson's Vistakon unit, which rapidly acquired the rights to and scaled up production of an innovative disposable contact lens technology branded Acuvue.

Customer intimacy entails better relationships, driven by a deep understanding of customer problems and a willingness to solve them, enabled by flexible processes, systems, people, and culture. Treacy and Wiersema pointed out that Home Depot clerks are happy to spend whatever time a customer needs to solve a home repair problem; the same for IBM sales teams.

The insights of the value disciplines approach are as true today as they were then, but the implementation details

have changed—significantly. Treacy and Wiersema were well aware of the opportunities inherent in information technology, highlighting, for example, how General Electric used a system called “Direct Connect” to enable independent dealers to utilize a stockless distribution model and sell from virtual inventory, simultaneously giving GE better visibility into customer orders, dealers higher profits, and customers better service.

However, the IT of that era largely involved enterprise systems. The web was in its infancy and mobile data was nonexistent. Now we live in an era where even three-year-olds play with smartphones and tablets more powerful than the mightiest supercomputers of those bygone times. Today, the Internet permeates our lives, with massive bandwidth increases enabling new services, such as home movie streaming and mobile social networking. Sensors can detect heartbeats and tremors, GPS can track vehicles, the cloud can apply sophisticated algorithms against enormous sets of not just numerical data, but videos, speech, and images.

This book attempts to answer a simple question: How should the Treacy and Wiersema value disciplines framework be updated for this new world of cloud computing, big data and analytics, social networks, broadband wireless and wireline connections, and smart, connected things ranging from thermostats to jet planes? In other words, how do digital technologies impact value disciplines to become digital disciplines?

Simply put: Everything stays the same, yet everything changes.

Better processes can still drive a competitive edge, but mere (physical) operational excellence is no longer sufficient. It must be enabled, complemented, and extended through *information excellence*, including real-time

dynamic optimization algorithms and the seamless fusion of physical and virtual worlds.

Better products and services are still desirable, but it is no longer sufficient to improve a standalone product. Today, products are not just digital and smart but connect to back-end cloud services, and from there onward to social networks and infinitely extensible ecosystems. The same goes for the physical embodiment of services—for example, healthcare services increasingly involve pills, pacemakers, and equipment connected to patient data repositories, diagnostic systems, and hospital asset management systems.

Better customer relationships are no longer just about caring, empathetic customer service employees or dedicated account teams willing to spend time on the golf course to get to know the customer. They are also about better meeting each individual customer's needs, by deriving subtle insights based on big data from all customers collectively. Examples include upsell /cross-sell in retail, more targeted recommendations in entertainment, and personalized medicine.

Finally, in today's hypercompetitive world, innovation is a critical imperative: delivering higher-quality results, faster, and more cost-effectively. Innovation encompasses not just products and services but also processes and relationships, and can benefit from new cloud-enabled constructs such as idea markets and challenges, which extend the innovation team beyond the company to the entire world.

After researching dozens of firms, the successful ones all seem to have exploited one or more of these themes; the fallen ones have largely failed to do so. [Amazon.com](https://www.amazon.com) versus Borders, Netflix versus Blockbuster, Wikipedia versus *Encyclopedia Britannica*, WhatsApp versus telco-based texting, and dozens of other cautionary tales offer object

lessons in harnessing information technology to disrupt and reimagine industries and outmaneuver competitors, or be overtaken by those who can.

This book offers what I hope will be valuable insights to boards and senior executives such as CEOs, CIOs, CDOs, CFOs, and CMOs (chief executive, information, innovation, digital, financial, and marketing officers), middle management, and line personnel in and outside of information technology. It is a book squarely at the intersection of business and technology, yet largely nontechnical. In a world where virtually all consumers are digital natives or digital immigrants, IT is no longer the province of the glass-house datacenter but an important weapon that virtually any enterprise—in business or government—must wield to be successful.

An implicit theme of the book is that winners win, not just due to random luck, but due to repeatable, structured principles. These principles align with and complement each other. For example, a focus on customer outcomes requires a continuous relationship with the customer, one that is hard to achieve with a standalone product, but one that can be enabled through a connected solution.

The book is structured to be readable from cover to cover, yet each chapter is also self-contained. As a by-product, this necessitates a bit of repetition. The book provides an introduction to some key technologies for those who are more business oriented, and an introduction to some key business strategy concepts for those who are more technology oriented.

The first few chapters provide an overview of the key insights in the book, background on Treacy and Wiersema's value disciplines framework and related strategy models, a more detailed overview of the digital disciplines, and an overview of the five key technologies—cloud, data, social,

networks, and things—which, together, are the enabling platform for this new wave of competitive strategies.

Following the introductory and overview matter, there are four main sections, one to address each of the four digital disciplines: information excellence, solution leadership, collective intimacy, and accelerated innovation. Each section has three chapters: an introduction or refresher on essential background ideas such as Porter's Five Forces model or the elements of innovation, the key themes and trends defining the discipline, and a specific case study. Case studies for Burberry, Nike, Netflix, Procter & Gamble, and General Electric provide real examples of how companies are applying the disciplines.

Because successful execution and customer adoption happen largely through people, two chapters focus on human behavior and gamification; one addresses general principles, the other provides a case study on Opower, a company that is heavily leveraging principles of human motivation in conjunction with information technology to simultaneously achieve customer, business, and societal objectives.

Finally, as with any initiative, there can be challenges and caveats in successful implementation. These range from strategic alignment and project management to concerns over privacy and security.

Technology marches forward. Twitter, Facebook, Instagram, WhatsApp, Snapchat, iPads, iPhones, and many of the other elements of the modern digital age didn't exist a few years ago, and change is speeding up, not slowing down. The last chapter addresses technologies on the horizon, and offers thoughts on how to apply the book's insights.

I have attempted to capture the intent of what Treacy and Wiersema eloquently and insightfully articulated, but it's hard to interpret one's own thoughts two decades later, much less someone else's. Any errors or misinterpretations are, of course, my fault.

It is a standing curse on books like these that companies that are held up as paragons can succumb to market turbulence, which has done nothing but increase, in no small part due to information technologies. In fact, during the time it took to write this book, the companies highlighted have adjusted strategies, divested brands, made acquisitions, discontinued products and initiatives, and faced new global competitors. However, the case studies represent a point-in-time snapshot of the issues, approaches, and successes of real companies facing turbulent markets, applying the strategies herein.

A number of books covering strategy and information technology oriented toward a leadership audience provide principles and detail themes such as empowerment and transparency. I'm sure these are well reasoned, but they don't seem to provide clear direction to leaders in industries facing increasing competition and the threat of digital disruption. It's my hope that the insights in the following pages can provide you with a framework with which to pursue a focused digital strategy and attain market leadership in your industry.

Joe Weinman
June 2015

Acknowledgments

The most important acknowledgment is surely to Michael Treacy and Fred Wiersema, who created a clear yet powerful framework for attaining competitive advantage while driving customer value. Without their original and compelling insights, this book wouldn't exist.

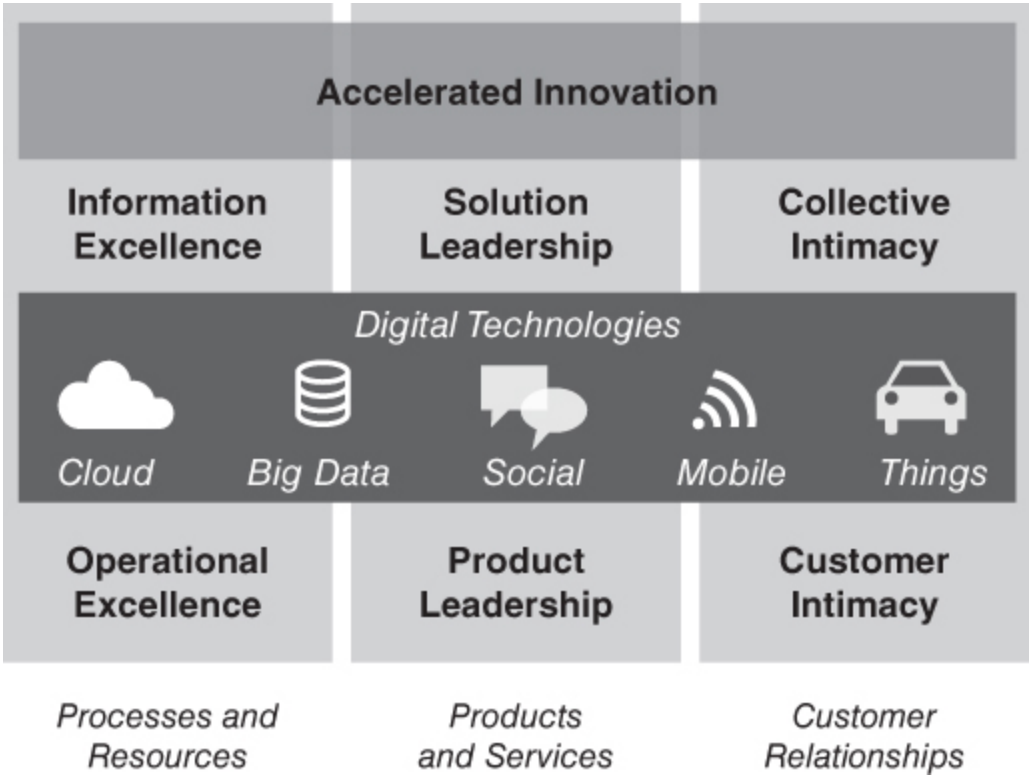
The next major acknowledgment is to all of the global innovators at companies large and small, old and new, who, in leading their organizations, have created such a rich set of case studies from which I could elicit points to illustrate and expand my thesis. As detailed in the book, this includes CEOs and key executives such as Angela Ahrendts (now at Apple), Christopher Bailey, and John Douglas at Burberry, Jeffrey Immelt, Bill Ruh, and Darin DiTommaso at General Electric, Reed Hastings and Todd Yellin at Netflix, Mark Parker and Stefan Olander at Nike, A.G. Lafley at Procter & Gamble, and Dan Yates and Alex Kinnier at Opower, as well as the leaders and innovators at the dozens of companies mentioned in the book ranging from Amazon.com to Zappos.

I'd also like to acknowledge helpful fact checks and support for interviewing executives from the companies highlighted in the case study chapters. This includes support from Joris Evers at Netflix, Holly Gilthorpe and Jennifer Villarreal at GE, Carly Llewellyn, Margot Littlehale, and Melissa Roberts at Opower, and their counterparts at Burberry, Nike, and P&G. I'd also like to thank the peer reviewers who provided helpful feedback and sanity checks on clarity and content: Tim Horan, Dawn Leaf, Jonathan Murray, Steve Sims, and especially Marla Bradstock. Needless to say, I am responsible for any remaining errors or inaccuracies.

A project like this can't come to fruition without a publisher able to appreciate the potential of a concept and demonstrate great flexibility. I have been fortunate to work again with the editorial and production team at John Wiley & Sons, including Sheck Cho, Stacey Rivera, Maria Sunny Zacharias, and Brandon Dust.

Part One

Overview and Background



Chapter 1

Digital Disciplines, Strategic Supremacy

On January 24, 1848, James W. Marshall, a carpenter from New Jersey, was helping to build a lumber mill on the American River near Sacramento when he noticed a twinkle in the water. It was the gold nugget that launched the Gold Rush, which, in turn, led to a population explosion and rapid statehood for California as fortune hunters and their suppliers—selling picks, shovels, food, libations, and more—descended on the territory from around the globe. The nonnative population of California grew from under 1,000 at the time of Marshall's discovery to over 100,000 by the end of the next year, thanks to the influx of Forty-Niners—mostly men who left their families behind to find riches. Even when the Gold Rush ended, much of the population remained, and so did a need for business associates, families, and friends to communicate with each other across the emerging nation.

To help meet this need, the Pony Express was launched on April 3, 1860. It could deliver letters and small packages between St. Joseph, Missouri, and Sacramento in only 10 days, a breakthrough for that era. The Pony Express accomplished this feat by using a cleverly engineered system of over 150 stations, hundreds of specially selected horses, lightweight riders, specially designed lightweight saddles, and clever “hacks” such as a horn to alert an upcoming station to ready the next horse. The stations were spaced about 10 miles apart, the distance a horse could go at top speed before tiring. In what was a forerunner to today's packet-switched networks such as the

Internet, a lightweight pouch containing the mail was handed off from rider to rider, each rider exchanging horses several times before being replaced himself.

On October 24, 1861—a year and a half after the Pony Express began deliveries—the first transcontinental telegraph network was completed, and in less than 48 hours the Pony Express ceased operations. Thus was a miracle of *operational excellence* supplanted by early information technology (IT) and what might be called *information excellence*. It foreshadowed the critical need to exploit IT—or be trampled and left in the dust.

From Value Disciplines to Digital Disciplines

To help companies avoid a fate like that of the Pony Express, this book delineates four *digital disciplines*—information excellence, solution leadership, collective intimacy, and accelerated innovation—by which IT can galvanize strategy, drive customer value, maximize competitive differentiation, help attain market leadership, and create wealth. The current darlings of Silicon Valley, such as Uber, Nest, Netflix, and Apple, utilize one or more of these strategies, but so can companies in other verticals and with century-old legacies.

Information excellence, as signaled by the transcontinental telegraph, exploits information technology, sophisticated algorithms, and the synthesis of digital and physical worlds to drive better asset utilization, better physical operational excellence, and better business processes: processes that are faster, more cost effective, higher quality, more flexible, more sustainable, or otherwise create differentiated value. Assets can be optimized with information through techniques such as