

Preface

According to the Industrial Research Institute's 2015 annual report [1], 2016's global R&D expense was 1.948 trillion dollars, trillion with a "t!" That strikes me as a very big number, and something you would want to manage well. R&D/innovation is even more important than the numbers might indicate. The free world is only as stable as its underlying economy, and innovation is the engine that powers its growth. Fellow researchers—please know that the fate of the free world is resting on your shoulders. No pressure, indeed!

I personally do not believe that innovation is well-led, and I suspect that most CEOs, CFOs, investors, and even the vast numbers of researchers who consumed a couple of trillion dollars last year would generally agree. This book is for all of you who want to know why, and want to do a better job of it.

Good leadership is vital for individuals and organizations to achieve growth and success. It has oft been discussed and there are many great students and authors of leadership principles. Some of my favorites include John C. Maxwell [2–4] who has written no less than 65 books on leadership, Jack Welch [5, 6], John P. Kotter [7–9], John Wooden [10], Peter Drucker [11–13], Clayton Christensen [14, 15], Daniel Pink [16], Robert Cialdini [17], Mark McCormack [18, 19], Dale Carnegie [20]... this list goes on and on. I encourage the reader to pick up several of these. A Google or Amazon search will generate several lists of: "The Ten Best...", The 25 Greatest..., The Seven Books on Leadership You Must Read Before 30," and so on.

One of my CEOs told me, "Once you've read three of them, they are all the same." I disagree. I have probably read or listened to 15 of Maxwell's books and have gotten rich insights from each of them. Maybe my boss is a quicker study than I am.

Given the extensive literature on this all-important topic, you rightfully should ask, “Who is this guy Spiro and what does he have to add to this important and already vast body of work?” Fair enough.

Innovation is a small but important subset of the more generic category of leadership, and one that I can add to from a practical perspective. Certainly there are many aspects of leading innovation that have been examined in the literature including Clayton Christensen’s, *The Innovator’s Dilemma* [14], and Geoffrey Moore’s *Crossing the Chasm* [21]. These are must-reads for innovators. The *Harvard Business Review* has dedicated articles and whole issues toward Innovation, and *Research-Technology Management* is a journal whose entire focus is R&D direction.

My perspective comes less as a formal student of innovation and its theoretical foundations, and more as a front-line practitioner. I did not sit in the ivory towers of academia, but actually slogged my way through the trenches of innovation in several industrial laboratories, and in numerous roles ranging from individual contributor, project leader, group leader, section manager, general manager of engineering, VP of R&D for two public companies, Chief Technology Officer, founder and tech-entrepreneur of my own company, consultant and innovation-career-coach, expert witness in patent litigation, leading business development for another start-up, serving on four Boards of Directors, and four Academic/Scientific Advisory Boards. In my career, I have been based in the US, but with labs and employees in Germany, Japan (2), Hungary (2), the British Isles (3), Mainland China, Finland, Singapore (2), Korea, and Taiwan (2). During my tenure, five of these labs were constructed. I have participated in—and consulted others over—the acquisition of technology, its due diligence, and integration. My perspective is from the innovation school-of-hard-knocks, from participating in—and leading—hundreds of individual projects.

I am very practical and tactical in this book. I explore putting together innovation teams and project plans, keeping them on track, killing off lagging projects when necessary, achieving results, and rewarding and recognizing the participants. I delve extensively into the cross-functional nature of innovation and the need for cross-business alignment to achieve success.

If you are a practitioner of innovation and want to get better at it, this book is for you. If you are in a significant business leadership role and want to understand why your organization’s innovation output is too low, or too slow, this book is also for you. It is quite prescriptive, and not at all theoretical. We explore real products and real situations.

I have written two other books, *R&D Is War—And I’ve Got the Scars to Prove It* (2012) [22] and *Up Yours—What to Do With an Engineering, Research,*

and Innovation Career (2013) [23]. The first is a series of amusing and interesting war stories of actual research projects from my career, and especially ones that went badly awry from the many mistakes I made along the way. The second is a career guide for innovators. This book will borrow from the other two books, but has a very different approach that I hope you will find both complementary and useful.

To assist the reader, I have italicized a few key phrases in the text, which appear in a glossary at the end.

Savannah, GA, USA
March 2017

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<http://www.springer.com/978-3-319-64154-6>

From Bench to Boardroom

The R&D Leader's Guide

Spiro, C.L.

2018, XXIV, 188 p. 7 illus., 5 illus. in color., Softcover

ISBN: 978-3-319-64154-6