LANGDON MORRIS MOSES MA PO CHI WU, PhD

AGILE INNOVATION

THE **REVOLUTIONARY APPROACH** TO ACCELERATE SUCCESS, INSPIRE ENGAGEMENT, & IGNITE CREATIVITY

WILEY

Praise for Agile Innovation

"Agile Innovation promises to profoundly transform businesses and institutions. By bridging the worlds of Agile and traditional innovation, the authors enable the transformation of self-organizing toward self-optimizing teams, and offer a map for the journey to the selfactualizing organization. This book is a strategic imperative for anybody aiming for success in a brutally competitive, digitally accelerated business world."

> -Errol Arkilic, CEO, M34 Capital and co-creator of the Innovation Corps

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-Tan Yinglan, Author of Chinnovation and Partner, Sequoia Capital

"As an advisor to hundreds of startups, I'm very interested in learning all I can to help foster innovation in rapidly shifting markets. *Agile Innovation* is a game changer. The authors have brought to us a valuable resource that is filled with pertinent case studies and practical advice. It's one of the best innovation books I've read in years and I think its approach can elevate the art and science of innovation at any organization."

-Akira Hirai, CEO, Cayenne Consulting

"This book is an outstanding addition to the 'bible of best practices.' It is certainly a unique treatise on successful, high impact innovation in the explosive new global digital age. More universities around the globe should be offering courses centered on this book's valuable content."

-Dr. Dixon R Doll, General Partner, DCM Venture Capital, Past Chairman, U.S. National Venture Capital Association

"Finally, a comprehensive book has been written to narrow the gap for companies seeking to make innovation a core driver of sustainable growth and positive financial impact. Today's corporate leaders must build a culture of agile innovation and this outstanding book is the perfect manual for business today."

-Harry W. Kellogg, Vice Chairman, Silicon Valley Bank

"Nothing has been written about more in the business world over the last decade than Innovation. However, the authors have brought something quite new to the discussion by weaving together many of the threads into a complex and colorful fabric that will aid any organization in fostering and utilizing innovation to grow and prosper. This idea-packed book will provide valuable lessons for those thoughtful business leaders who realize, as the authors note, the risks of innovation are far less than the risks of not innovating."

—Elliot E. Maxwell, Director of the Internet Policy Project at the Aspen Institute, and former Special Advisor on the Digital Economy to the U.S. Secretary of Commerce

"Agile Innovation is a tremendous leap forward in innovation thought leadership. The authors first synthesize the best prevailing innovation practices of today and then take it to a whole new level. This ground-breaking book has just the right mix of examples and advice, including hands-on methods and detailed management practices. As a result, this book is an absolute gem."

-Jacob Hsu, Chief Executive Officer, Symbio.com

"There really is no option but innovation. The authors teach you the art of innovation: building the right innovation processes; reducing innovation risks; amplifying innovation through collaborations; and developing innovation leaders. An insightful and practical methodology for winning through *Agile Innovation*."

-George Bickerstaff, Managing Director, M.M. Dillon & Co

"Morris, Ma, and Wu have taken what are on reflection two blindingly obvious bedfellows and put them together in a story that makes sense, and just as important, is a fascinating read. The Agile Innovation concept is not just a good one for start-ups to consider, it also presents a disciplined approach for managing what a great many large corporations currently do not manage well.

-Larry Campbell, knowledge management expert

"Innovation is too often discussed in the abstract, almost as a spiritual totem. The authors of *Agile Innovation* demystify innovation, and lay out a thoughtful road map for readers to understand how to create innovative organizations. It should be on the reading list of anyone who wants to prepare their companies for the rest of the twenty-first century. All our portfolio companies will certainly receive a copy!"

-Gary Rieschel, Founder and Managing Director, Qiming Venture Partners

"Finally, here's a book that pulls far away from the me-too peloton of innovation tomes. Enlightening, energizing and execution-oriented, *Agile Innovation* should be at the top of the reading list for professional services firms leaders."

-Andrew Dietz, CEO of Creative Growth and author of The Opening Playbook: A Professional's Guide To Building Relationships That Grow Revenue.

"Agile Innovation is an essential survival guide for businesses large and small in what is an ever-changing but always fiercely competitive 'innovate or die' environment. A clear and thought-provoking synthesis of the principles of Agile development that have revolutionized software development, extrapolated to a set of best practices for innovation generally."

-Gordon Davidson, Fenwick & West

"*Agile Innovation* is more than a wake-up call! It is about survival issues in a fast changing, highly complex world. A 'real must-read' for all leaders and managers who are responsible not only for the further development, but also for the survival of their organizations."

-Mark Schmid-Neuhaus, MD, German Fairness Foundation

"Agile Innovation pours a very potent brew of innovation insight and wisdom. This is required reading for anyone hoping to thrive in the highly competitive international marketplace in the twenty-first century. It distills the essence of the innovation spirit into an agile process."

-Jerome Conlon, Former Global Director Marketing Insight, Nike, VP Brand Planning Starbucks and Sr. VP Marketing & Program Development NBC, President Brand Frameworks, LLC

"Sustainable Innovation: the speed to innovate and the ability to foster a culture or constant creativity is becoming a critical function for organizations given the fast pace of today's global business. *Agile Innovation* captures the essence of this domain in a succinct, informative and highly engaging manner."

-George Thomas, Partner and Director, IBM Corporation

"Agile Innovation is a very creative and practical book. It borrows very sharp, useful and pertinent learnings from the AGILE methodology to make the innovation process effective and agile. The book has important lessons for all—senior leaders, middle managers, and young managers."

-Ravi Arora, Vice President, Tata Sons

"A true masterpiece! *Agile Innovation* is taking us in our journey to a whole new level of innovation. The powerful collaboration between three talented experts has brought out the best book on innovation ever!"

-Signe Gammeltoft Frantzen, Partner, SandS Design

"If there is one book to read on Innovation, we would strongly recommend this. It is an innovation on innovation with a fully integrated approach. It provides a complete guide from plan to implementation, with the agile approach to manage the process and mitigate risk. This is must-have for management to achieve higher chance of success."

-Alfred Pang, CEO, TSM Singapore

"*Agile Innovation* provides wisdom, framework, process, and tools that guide people accomplish great innovation results through collaboration, quick response to change, and iterative working philosophy. It's really a great book about implementing innovation."

-Arthur Lok, CEO, China Institute for Innovation

"Agility meets Innovation. This is a concept blend that will thrive in facilitating exponential value creation in years to come. The book harmonically covers people, leadership, methodological, technological, implementation, and even philosophical aspects related to this novel integration. It's a great book and I strongly recommend it!"

---Fabián Szulanski, Director, Learning Lab, Instituto Tecnológico de Buenos Aires.

"Langdon Morris, along with Moses Ma and Po Chi Wu, have produced Agile Innovation when it is most needed by the market. As we continue to see an evolution from 'we must innovate!' to 'how do we innovate?' this commonsense approach to moving your organization from simply talking about innovation to actually achieving innovation breakthroughs is simply elegant."

-Brett Trusko, President, The International Association of Innovation Professionals, Texas A&M University, New York University

"This book is a must-read for practitioners of innovation. The principles of *Agile Innovation* can unleash the transformative potential from every corner of an organization, creating sustainable competitive advantage."

-Annie Donovan, CEO, CoMetrics

"Agile Innovation has the potential to move the entire field forward, through the clarity of its writing and the importance of its message. If you are going to read only one book on innovation this year, make it this one."

-Pascal Baudry, Founder, WDHB Consulting Group



AGILE

THE REVOLUTIONARY APPROACH TO ACCELERATE SUCCESS, INSPIRE ENGAGEMENT, AND IGNITE CREATIVITY

> LANGDON MORRIS MOSES MA PO CHI WU, PhD



Cover image: Man Jumping © iStock.com/4x6

Cover design: Wiley

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

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Library of Congress Cataloging-in-Publication Data:

Morris, Langdon.

Agile innovation : the revolutionary approach to accelerate success, inspire engagement, and ignite creativity / Langdon Morris, Moses Ma, Po Chi Wu.

2014023093

pages cm Includes index. ISBN 978-1-118-95420-1 (cloth); ISBN 978-1-118-95421-8 (ebk); ISBN 978-1-118-95422-5 (ebk) 1. Organizational change. 2. Creative ability in business. 3. Success in business. I. Ma, Moses, 1956- II. Wu, Po Chi, 1948- III. Title. HD58.8.M653 2014 658.4'063-dc23

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

For Elizabeth With love always, and deep appreciation for all you do. —Langdon

For Qian

Who is both agile and innovative in the ways of love. Thank you so much for helping me see how beautiful life can be.

-Moses

For Mary

Without your loving support and encouragement, my life would have no meaning. Your innate entrepreneurial spirit has taught me the essence of agility and focus.

—Po Chi



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ABOUT THIS BOOK



Charles Darwin said it quite well:

"In the long history of humankind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed."

Innovation, collaboration, and improvisation are essential forces shaping all of business and all of modern life, and they've become vitally important for the individual, for the organization, and indeed for all of society.

The significance and importance all three and their close cousins, adaptation, leads us to some essential questions:

How well are you and your company prevailing in the current environment of accelerating change?

How well positioned are you and your company to benefit from the countless new opportunities that change is bringing?

Does your organization have a rigorous innovation process? Are you sufficiently agile to survive and to succeed?

These questions matter so much because the scope of the challenges that every organization faces today is nothing less than enormous. Threats are everywhere, technology is accelerating, and success clearly belongs exclusively to those rare organizations that have the capacity not only to adapt to change, but also to thrive on it, and indeed to create it.

How do they do that?

The great companies disrupt industries by reshaping entire market ecosystems. The market is forced to adapt to them.

Perhaps your organization is among these exemplars?

If not, then it's likely that Agile Innovation can benefit you. That is the promise of this book.

MASTERY OF INNOVATION

The art and science of creating change is really the mastery of innovation, but innovation takes many forms: new products and services that turn customers into evangelists; new sales channels that dominate markets and confound competitors; accelerated product development time frames that amaze and delight customers, investors, and stakeholders; and novel technologies that inspire wonder.

Agile Innovation asks:

How can these outputs be achieved not just once, but consistently?

Our answer, and the essential argument of this book, can be summarized in this way: The market is becoming brutally competitive. It is much like a war, and to survive, your organization must become proficient in innovation, which, of course, could become one of the most powerful weapons in your arsenal. In fact, given the accelerating rate of change, *there really is no other option but innovation*.

What is required, then, to master innovation and to become an agile, adaptive, winning organization?

First, design the right business processes that enable you to outinnovate your competition, combining quality and speed.

Second, reduce the inherent risks in innovation while making the right investment decisions in new ideas.

Third, generate ideas that are better than everyone else's by effectively engaging a larger group of people—the entire organization as well as its broader ecosystem—as effective co-ideators.

Fourth, develop and demonstrate exceptional leadership skills, because making this all happen will probably require that you provoke and lead a genuine revolution in how your organization operates.

These principles constitute Agile Innovation, which is a blend of great advances in technology development (Agile Software Development) with the leading-edge practices and principles of innovation management.

How easy to do is all this?

Well, it may not be so easy at all, and it's probably going to be a big challenge. But it is definitely achievable, and the rewards from doing so will be great.

Anyway, what's your next best alternative to innovation? Is there even any alternative? Probably not.

WHY DON'T LARGE FIRMS INNOVATE?

The development and refinement of Agile Innovation has been the focus of our work for quite some time, and it is a passion that the authors share wholeheartedly. As a consultant (Langdon), technologist (Moses), and investor and educator (Po Chi), we've been deeply engaged in developing, practicing, and sharing the principles and practices of effective innovation management over the past two decades.

Underlying this work has been a constant theme: Large organizations, by their very nature, have difficulty embracing a culture of continuous innovation, and they struggle to adopt the necessary practices.

But this is neither necessary nor inevitable. The belief has to be changed, or there are going to be a lot of unpleasant consequences.

Why don't most large firms innovate well?

Many of the root causes are related to the challenges inherent in managing a large enterprise: the need for coordination, scale, efficiency, and sustained profitability in a brutally competitive, global marketplace, and an equally brutal securities market.

Further, the modern corporation is typically built on structures, rules, and processes that may also inadvertently stifle innovation, or even kill it outright. Whether intentional or not, the premature mortality of ideas and innovations occurs regularly. The logic behind suppressing innovation may even make sense, in a limited, short-term context, such as when senior executives try to exercise control over unwieldy organizations so that critical objectives can be achieved.

In so doing, however, they often sacrifice important long-term benefits. Hence, one of our goals in this book is to show how *shortterm objectives and long-term needs can be balanced*, and how operating units and innovation teams can work in close and effective partnerships rather than as bitter rivals that compete for resources.

During the years that we've been applying and refining these concepts, we've also been nurturing new enterprises (as entrepreneurs, consultants, and investors) and new technologies (as scientists and technologists). Through this work, we've come to appreciate the value of the methods widely known in the tech sector as Agile.

Agile refers to a set of principles and practices that software programming teams have developed with two major goals: to accelerate their work and to reliably produce work of the highest quality. By reducing the burdens of bureaucratic project management, they also free programmers to work more productively and with much greater satisfaction. This effort has been amazingly successful, and a robust methodology has emerged since "The Manifesto for Agile Software Development" (www.agilealliance.org/the-alliance/the-agile-manifesto) was published in February 2001.

In this book, we are delighted to be able to bring the two concepts together into a unified, effective, and practical methodology. How are Agile and classical innovation management related? One way to think of it is this: Agile is a speedometer that allows you to know your speed, and therefore gives you the ability to calculate when you'll reach your destination. Without a speedometer or odometer, reliable measurement, in other words, you have to guess, and the longer and less familiar the route, the worse your prediction will be.

Agile Innovation, in complement to your Agile speedometer, is the global positioning system (GPS) that helps you stay on course. Even without plotting your course in detail ahead of time—or developing comprehensive documentation and specification—you can get started right away, and if you make a wrong turn or hit a traffic jam, your Agile Innovation GPS makes a course correction. Whether the journey is 10 miles or 10,000, you'll always know the estimated arrival time.

In the applications of Agile Innovation we have completed to date, the approach has proven to be a powerful enabler of success, and we hope that as you traverse these pages you'll find the blend of Agile with Innovation a valuable speedometer and GPS for innovation in your own enterprise.

Agile Software, Agile Innovation, and Agility

Please note that in this book when we capitalize the word *Agile*, it refers to the formal practice of Agile Software Development methodology. We use the terms *Agile* and *Agile Software* when we're referring specifically to the movement that has grown out of the Agile Manifesto. You will also notice the term *Agile Innovation*, which refers to the overall innovation management model that we develop throughout this book.

When we don't capitalize it, we mean the more general concept of agility, which refers to a more general capacity to adapt to change.

David versus Goliath

Many practitioners and advocates of Agile tend to see themselves as Davids, small, lean, and determined, standing toe-to-toe on the battlefield and fighting an enormous bureaucracy of Goliaths, whose sole function is to suppress their creativity, their innovativeness, their productivity, and even the joy they find in their work.

Consequently, in much of the Agile literature, there is an undertone of rebellion, and determination to defend the capacity of programmers to self-organize because they love their work and are fully committed to performing to the utmost of their abilities.

In this respect, the Agile movement reflects a profoundly important and meaningful inner drive.

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Inner motivation is the root system that supports great works of genius. External motivation, on the other hand, is based on reward and punishment and can achieve, even at its best, only compliance.

This burning desire to achieve greatness is reflected in the creation of Agile, and this principle of inner drive is also a key premise of our work. By extending this same energy, the same drive, beyond a group of programmers or a research and development team to other parts of an organization, tremendous value can be created and captured.

Although our passion is to direct this marvelous innate creative force specifically toward innovation, this book will show you how the same concepts and principles can be applied in a great many aspects of your organization.

What is the story of Agile Innovation?

The shift we are proposing is from traditional, top-down, control-oriented management to self-organizing, customerdriven Agile Innovation. This is, of course, nothing less than a revolution.

In Part 1 you'll learn what this new way of working entails and why the powerful forces that are driving the economy and society will most likely require your organization to engage in this type of revolution sooner (better for you), or later (procrastinating will come with lots of adverse consequences).

In Part 2 we'll help you design the specific work processes that are necessary to create change and empower innovation throughout your own organization.

In Part 3 we'll suggest the critical factors for you to consider as the leader of your organization's revolution, putting your plans into action.

Innovation is a great journey of creation, and Agile Innovation is the same, only faster and perhaps better. Thank you for joining us!



THE INNOVATION REVOLUTION

 \mathbf{A} new movement is emerging.

Product and technology development teams all over the world are now quietly engaged in a highly effective revolution that is changing business forever.

They are self-organizing to adapt to the accelerating rate of change and the complexities of the global digital age. Industry after industry, from Internet software, to aviation, to digital health care, to mobile telephony, is using a process called Agile to turn out better results in less time.

Agile is fundamentally changing the way that business works.

Soon Agile will move beyond the technology world because the insights it reveals are applicable across the entire organization.

This book describes Agile Innovation management, a radically new and eminently practical approach to the challenge of survival. When this happens, a true revolution will begin—not something limited to the self-contained world of software development, but instead spreading geometrically, catching on in every industry.

The revolution we speak of isn't the kind where people wear berets, wave banners, and hope for a coup d'état. The revolution we mean is a paradigm shift, as described by a modest book published 50 years ago, *The Structure of Scientific Revolutions* by physicist Thomas Kuhn, which went on to be one of the most influential books concerning the history of science.¹

His core idea is that a paradigm is an intellectual framework that makes research possible, but which at the same time bounds knowledge and results in resistance to the development of new frameworks. A scientific revolution occurs, according to Kuhn, when scientists encounter anomalies that can't be explained by the current paradigm. When enough anomalies have been collected, the discipline is then thrown into a state of crisis, until eventually a new paradigm is formed, which then gains its own followers. An intellectual battle then ensues between the followers of the new paradigm and those clinging to the old.

These insights have been so influential because they describe how the world works—instead of steady, cumulative progress, we actually experience discontinuities and periods of turmoil, uncertainty, and angst, until in the end such a crisis is resolved by a revolutionary change in worldview, in which a new paradigm replaces a now-deficient one.

We are going through such a change today. The old way of working has become swamped by the blinding speed of change, and its bureaucratic structures cannot keep up, leaving organizations of all types struggling for breath, struggling to keep up. The new, emerging paradigm is characterized by the concepts and principles of agility, and thus the Agile Innovation Revolution is a manifesto to guide you toward your future.

It's a new world coming, and by using these techniques and methods to achieve new levels of productivity and collaboration; by empowering and leveraging self-organizing teams; by increasing insight, innovation, continuous learning, and knowledge sharing; and by forging the innovation culture, your organization can speed up its internal clock to survive and to succeed.

In these first four chapters, we will explore the genesis of this revolution:

Chapter 1, "Starting at Sprint Zero: A Better Way to Innovate," is an introduction to the current state of Agile project management and classical innovation theory.

Chapter 2, "Becoming Agile Rapidly and Painlessly," explains Agile theory and then presents the basic concepts of Agile Innovation management.

Chapter 3, "Transforming How We Work," delves into the process of transforming both innovation and execution.

Finally, Chapter 4, "Thriving in Change," reiterates why innovation is imperative for any twenty-first-century enterprise or organization.



STARTING AT SPRINT ZERO A BETTER WAY TO INNOVATE

The software industry is turning around and radically improving. The uncertainty, risk, and waste you are used to are no longer necessary. —Ken Schwaber and Jeff Sutherland¹

wis Agile changing the world? Let's begin with a bit of background.

If you are new to Agile Software technique, then the term *sprint zero*, as used in the title of this chapter, may not mean much to you, but for Agile practitioners it means the initial phase of work where you sort the project out to make sure you start properly when you're about to tackle a large programming endeavor.

In Agile terminology, the word *sprint* refers to a one- to two-week chunk of work, during which a programming team sets specific goals for itself and then works swiftly to achieve those goals.

When work is organized this way, in small and manageable chunks, brilliant and remarkable results have been achieved in the development of large software systems, the kind that run banks, airlines, health care systems, and even governments.

This is in direct contrast to the well-documented inadequacies of non-Agile approaches, which have led to extensive delays, cost overruns, and sometimes brutally terminal failure.

Epic Software Development Failures

You would hope that the technology industry has learned its lessons by now. But you might be wrong about that. The state of Oregon, for example, recently cancelled work on its massive online health care exchange, Cover Oregon, and switched over to the federal government's system, but not before paying \$134 million to Oracle for its years of work on the failed project.² This certainly qualifies as an epic failure, but it is by no means unique in its epicness. Studies by Standish Group published in its annual CHAOS Report regularly find that nearly two out of every three information technology projects fall short or fail entirely for various reasons, most of which are related to the use of a dysfunctional process. This is an amazingly bad performance rate across an entire industry.

But this may be just the tip of the iceberg. Numerous reports and studies have looked at failed IT projects costing hundreds of millions of dollars, and even billions, including an \$8 billion failed project for the U.S. government's taxation agency (the IRS), a \$170 million project for McDonald's that was completely abandoned, a \$600 million baggage-handling system for the new Denver airport that never worked, and a project for the London Stock Exchange that was originally budgeted at £6 million and was ultimately cancelled after 10 years and £800 million.³