A practical approach to the creation
of an innovation culture
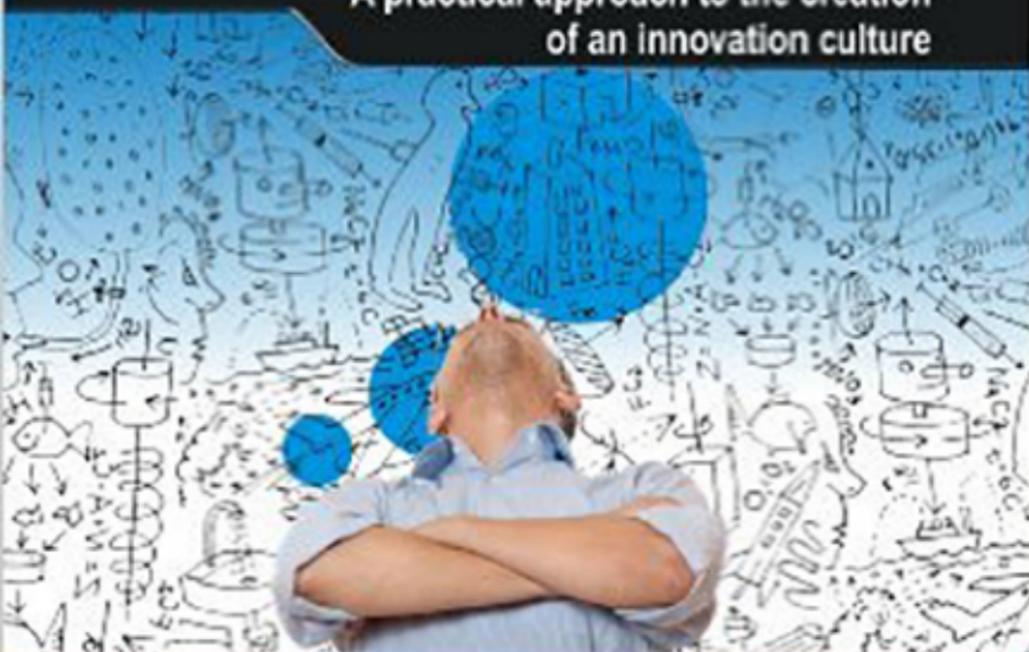
The Discipline
& Culture
of Innovation

A Socratic Journey

Jay Rao
Fran Chuán

The Discipline
&
Culture of Innovation

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Jay Rao & Fran Chuan

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PROFIT
editorial

I dedicate this book to my wife Clemencia and our children Maya and Paloma. They endure without complaints my frequent and at times extended travels for teaching and talking engagements. Without their absolute affection and significant sacrifices this book would not have been possible. I am also grateful to my parents, my sister, and my extended family for their enthusiastic encouragement, constant cheer leading, loads of love and an unwavering belief in all things that I do.

Jay Rao, Boston

Only self-confidence and conversation with others move us to explore new worlds and new opportunities. I have only words of gratitude for Anna, my wife, for her patient response to the continuous challenges in which I, as an entrepreneur and innovator, involve her. And for her patient and inestimable contributions through the innumerable drafts that this text went through before it reached your hands.

Fran Chuan, Barcelona

Contents

Preface

The word "innovation" is fashionable. Everyone uses it, and it has become the magic solution to all our social and economic problems.

We witness a great proliferation of attempts to continuously make our society and our production systems more innovative, creating Ministries of Innovation, launching public support programs to R&D and Innovation, and organizing events and symposia to facilitate exchanging ideas. We even compare ourselves with successful companies looking for which traits to imitate.

In many occasions however, the results are appalling. Despite significant resources devoted to this effort, the expected transformation does not happen as desired.

I believe that in many cases the problem lies in our lack of clarity about the real meaning of the word "innovation": some think in R&D, others in radical change or in organizational restructuring, and many do not even take the time to form an opinion on the subject, being too busy with their daily tasks.

In an entertaining way, we will find some clues throughout the book to help us define INNOVATION more precisely, and clarify

that it is not a process, but a result which translates into new products, services, business opportunities, markets, etc.

All organizations have an Innovation Department or something similar, but throughout my professional career, always linked to the world of innovation in different companies, I have discovered that the equation INNOVATION = RESULTS is what makes the difference between the innovative and the non-innovative companies.

The innovative companies focus on the expected results to be delivered by the resources invested on innovation, developing the tools necessary to achieve them, but never the other way round.

The innovative companies act, practice, and fail – or sometimes succeed. I like the statistics showing that more than 90% of innovations fail, because it means that a significant percentage of them are successful. Let's not forget that when we implement an innovative product, service or business, our competitive advantage will be a more powerful force than any other management tool at our reach. Is it worth? I believe so.

I hope that you enjoy the book as much as I did: the dialogues, the paper towels, Mike the "Socratic" master and John his gifted pupil. If you start reading it, you will be rewarded with the initial clues allowing you to start the innovation journey, … neither more nor less; a journey we all agree we don't know where it will take us, but in any case always stimulating …

AGUSTIN DELGADO MARTIN
Director of Innovation
IBERDROLA

P. S. I immensely enjoy my journeys of adventure, but I always get myself prepared in advance.

Introduction

Innovation. It may be the business buzzword of our time. Corporate ads and annual reports proclaim that "Innovation is what we are all about." CEOs exhort their people to "Be more innovative." Meager product alterations are touted as innovations. "Now available in five unique colors!" Chief Innovation Officers are being appointed in more and more organizations.

Yet for all the use and abuse of the term, few firms have demonstrated an ability to innovate repeatedly and in meaningful ways over time. For the rest, *innovation* is more of a slogan or aspiration than a practice that produces dependable results. Most employees recognize this; they've managed to separate the hype from reality.

The word *innovation* has become popularized to the point of overuse and tedium, why do we still leave innovation to chance and good fortune? Why do we go on confusing innovation with just invention and R&D? Even organizations that have seriously committed to innovation are only achieving partial results because of their over reliance on idea generation software and premature use of rigid stage-gate processes. In fact, on

Dec. 31ˢᵗ 2008, Bruce Nussbaum, *BusinessWeek's* ex-Innovation guru wrote:

> "Innovation died in 2008, killed off by overuse, misuse, narrowness, incrementalism and failure to evolve. It was done in by CEOs, consultants, marketeers, advertisers and business journalists who degraded and devalued the idea by conflating it with change, technology, design, globalization, trendiness, and anything 'new.' It was done in by an obsession with measurement, metrics and math and a demand for predictability in an unpredictable world."

Four years later, this overuse and misuse was still alive and well. A May 23ʳᵈ, 2012 article from the Wall Street Journal, "You call that innovation?" validated and reinforced this observation. Below were a few highlights from the article that was based on a CapGemini Study of 260 Global executives: (1) 4 in 10 have a Chief Innovation Officer and such titles may be mainly "for appearances," and (2) most of them conceded their companies still don't have a clear innovation strategy to support the role.

Every year I find myself in front of one-thousand-plus executives and senior managers, and hundreds of executive MBA students, and I ask them the same question: "How many of you are tired of the word *innovation*?" Many hands go up. When asked why, their responses are predictable:

> "There's a lot of talk about innovation around here but very little action."

> "We're asked to be innovative, but are never given the time or resources."

> "Our innovative projects are shelved whenever quarterly targets are missed."

> "The term is meaningless—anything that's slightly out of the ordinary around here is touted as an innovation."

> "Our leaders want us to be innovative when they aren't."

The overuse and abuse of the term *innovation* is leading to dismal outcomes and disillusionment. It is also wasting lots of money. Some firms invest in group collaborative software and creative spaces and go-to-market new product development systems. Still others set up internal venture funds and innovation tournaments in order to capture creative ideas. And, of course, lots of money is spent on consultants who, it is hoped, will whisper the secret formula of innovation into the CEO's ear. This spending, however, hasn't paid off as hoped.

On the other hand, as technology cycles come faster, as the amount of information explodes exponentially from month to month, and as competition appears from unexpected corners of the globe, serious executives are increasingly hoping that "Innovation" can keep their enterprises competitive and thriving. They are asking tough questions. They are earnest about their investments in innovation. They are trying to solve difficult problems and their firms are creating new value for their customers. There is data to show that innovation does pay off.

So, innovation efforts are delivering for some firms and not for others. This book explains why.

The Book in a Nutshell

Innovation in enterprises results from two co-existing conditions: (1) *treating innovation as a discipline*, and (2) *creating a culture of innovation*. Executives have the power to create each of these essential conditions. They needn't rely on luck—though luck never hurts. And they needn't rely on a strategy of hope—which is no strategy at all. Discipline and a culture that supports innovation will produce the growth that these executives so badly desire.

Some empirical evidence on Innovation

Contrary to conventional wisdom, an extensive 2004 Booz Allen Hamilton Global Innovation study of 1000 publicly held

firms around the world that spent the most on R&D showed that R&D spending levels had no impact on sales growth, gross profit, operating profit, enterprise profit, market capitalization, or total shareholder return.[1] Booz Allen also investigated the relationship between R&D and patents. Firms that spent a lot on R&D did have a much larger patent portfolio, but the level of patent activity did not correlate to growth, profitability and shareholder return. The same study also concluded that of all the core functions of most companies, innovation still has the most competitive value, but was managed with the least discipline.

A 2007 McKinsey innovation report[2], based on a survey of nearly 1400 executives from around the world concluded the following:

- Senior executives cited innovation as an important driver of growth but few explicitly lead and managed it

- CEOs and Executives were frustrated with their efforts to jumpstart innovation initiatives

- There was overall dissatisfaction with the dismal outcomes of their innovation efforts

- Mimicking best practices were often ineffective

- Resources and Processes that were applied were either underutilized or not achieving scale to have a financial impact

- 94% of the executives responded that people and corporate culture were the most important drivers of innovation

- Nearly a third of them managed innovation on an ad hoc basis.

Another 2007 McKinsey survey of 600 executives revealed that senior executives did not actively encourage and model innovative behaviors. The Booz study had also concluded similarly about the importance of R&D spending along with certain approaches to organization, culture and decision making.

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1 Money Isn't Everything, S+B, Booz Allen Hamilton, Dec. 5, 2005

2 Leadership and Innovation, The McKinsey Quarterly, 2008, No. 1

In 2010, a multi-year study by the Boston Consulting Group consistently found that focusing on innovation did pay off; there was a strong correlation between innovation prowess and overall business performance. BCG found that true innovators outperformed their peers by nearly 12.4% over a three year period and by a modest 2% over ten years.[3] In the same report, 71% of the nearly 1500 executives and managers felt that innovation was among the top three priorities for the firm. However, despite some improvement over a four year period, dissatisfaction among executives with the financial return on innovation spending remained high (45% of 1590 respondents from around the world). But the dissatisfaction among employees was much higher (nearly 64%).

The previously mentioned 2004 Booz Allen study had identified from among the Global 1000 largest R&D spenders only a small set of 94 so-called high-leverage innovators had chalked up five consecutive years of above median performance in terms of growth, profit and shareholder value while spending less than their peer group for their innovation initiatives. In 2009, 2010 and 2011 Booz Allen studies of the Global 1000 largest R&D spenders, the Top 10 Most Innovative Firms (as identified by their executive respondents) had consistently and significantly outperformed not only their industry peers but also the top 10 R&D spenders on three financial metrics – revenue growth, EBITA as a percentage of revenues and market cap growth.[4] [5] [6]

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3 Innovation 2010, *BCG Report*, Boston Consulting Group, April 2010

4 "The Global Innovation 1000, How the Top Innovators Keep Winning," *Strategy + Business*, Booz & Co., issue 61, winter 2010

5 "The Global Innovation 1000, Why Culture is Key," *Strategy + Business*, Booz & Co., issue 65, winter 2011

6 "The Global Innovation 1000, Making Ideas Work," *Strategy + Business*, Booz & Co., issue 69, Winter 2012

What is causing the pain?

There are several reasons as to why Innovation is not working for even those who are serious and investing in earnest. Certainly, with so many people thinking and talking about innovation, we must be making some progress. Perhaps. But imagine for a moment how much *more* progress we could be making if innovation was treated less as a buzzword or aspiration, and more as a true management *discipline*!

I am a professor of management at Babson College, where my focus is innovation and corporate entrepreneurship. Over the last decade I have worked closely with more than 40 firms around the world—small, medium, and huge multinationals (a complete list of these firms can be found on my website). My work takes the form of speeches, seminars, executive education, and consulting. I constantly hear the horror stories related to innovation initiatives and efforts inside of these firms.

In our own experience, it is not just the majority of the large, global 1000 firms that are struggling with innovation. Innovation naiveté is still rampant among executives, managers and employees in firms of all sizes. A lot has been written and talked about Innovation. Yet myths persist. Typical myths include:

- Innovation is invention
- Innovation is just for the R&D folk
- Innovation is technology
- Innovation is just about products
- Innovation is new product development
- Innovation does not work in my industry
- Innovation does not work in my country
- Innovation is luck
- Innovation is expensive

- Innovation is about giving everyone 10% time off to do their own thing
- Innovation happens when we buy an idea generating software
- Innovation is a process, so let us implement a funnel like stage gate.

These are not just myths. This is illiteracy. It is not just the term that is misused and overused, the concept of innovation is misconceived. And, it's about time that we address this ignorance. To put it simply, **Innovation is a Discipline! Period.**

What do we mean by this? Mr. Nussbaum was both right and wrong. The faddish Innovation 1.0 is dead but the systematic Innovation 2.0 is still in its infancy. Currently, in a majority of the firms, Innovation is not being treated as a management discipline like the other management disciplines—strategy, marketing, finance, economics, IT. Yes, innovation has become mainstream, but the way it is put into action in most firms is still not disciplined—deliberate and determined. Innovation can be a systematically planned and organized activity and with a certain degree of predictability. In terms of its maturity, the discipline and the general practice of innovation today is where the practice and discipline of quality was 20 years ago.

To understand this, it may be instructive to look at how other management disciplines evolved over time.

Evolution of Management Disciplines

Many disciplines operate in the world of business, and their evolutions provide insights into the development of innovation as a field of practice. Consider the very established discipline of marketing. In 1905, University of Pennsylvania offered a course in "The Marketing of Products." Like other disciplines, marketing has several conceptual frameworks (like the "4Ps") and a unique vocabulary. It has developed practical methods

(e.g., segmentation) and tools (e.g., conjoint analysis) that practitioners master through formal study and apply in a variety of situations. Subfields of marketing such as advertising and consumer behavior have broadened the discipline. Over time, academic departments have formed to increase the body of marketing knowledge and to pass it on to others. Journals, professional associations, and conferences dedicated to marketing and its application have emerged over the years.

We have witnessed a similar evolution with the 'quality' movement which, like innovation today, was initially more aspirational than effective. Let us look at how the quality movement emerged, developed, and embedded itself in practice and into enterprise culture.

The quality movement has gone through several phases of maturity in its 50-year history: beginning with Deming's 14 points, moving on to Juran's trilogy, then to Feigenbaum's TQC, to TQM and most recently Six Sigma.

Post-World War II, Dr. Deming and Juran taught statistical and quality management techniques to Japanese businesses. By the late 1960s, Japanese management had fully embraced Total Quality Control. The focus at that time was inspection, reaction to defects and quality control. Through the 70s, the responsibility for quality was very much functional and limited to a few people in the firm. Still, this enabled the Japanese to enter the U.S. markets with cheaper products and higher levels of quality. It was only after significant market share losses in several industries—steel, home appliances, automotive, memory chips—did the U.S. and W. European firms acknowledge the importance of quality management.

The adoption of quality practices weren't limited to business applications. In 1980 the U.S. Naval Air Systems introduced the term TQM. The new thinking included—design-in quality, prevention of defects and everyone responsible for quality.

Because many commercial vendors worked with Air System command, this fostered awareness and adoption among many companies. We saw many companies embrace TQM and it spread like wildfire. But, initiatives at a large number of firms failed due to poor education, sloppy implementation, and ineffective change management practices.

Six Sigma marked the latest evolution in the quality movement. While retaining several fundamental statistical and process principles from before, it was a more deliberate, systematic and comprehensive approach that clearly represented a major step forward compared to previous generations. Developed in the mid-1980s at Motorola, Six Sigma rose to prominence when Motorola won the Malcolm Baldrige National Quality Award in 1988; the first year the award was presented. Six Sigma had a few distinctive features that its predecessors lacked—(1) it integrated with existing strategy and initiatives of the firm, (2) it was driven and championed by top leaders in the firm, (3) it created a cadre of experts—master black-belts—in the concepts and tools of quality, (4) it trained an entire community—black and green belts—to become knowledgeable about its strategic implications, and (5) this community had the ability to use the principles of quality in specific situations by way of focused projects and apply proven change management skills.

This practical, comprehensive approach helped the critical principles and practice of quality to percolate into a majority of firms worldwide. Simultaneously, the quality movement evolved to become a "discipline," i.e., a body of knowledge or a field of study.

So, like all academic disciplines – physics, sociology, linguistics, accounting, marketing, quality – innovation too can be managed. It can be taught, it can be learned, it can be practiced and over time enterprises can master innovation.

We can learn several lessons from how firms have mastered other disciplines like marketing and quality.

Mastering a Discipline

Mastery is the result of desire, choice and commitment.

Firms cannot excel at any discipline unless there is a burning desire to do so from the leadership team. If there is the desire then the executives will spend time and money towards building capabilities within the enterprise to master that discipline. To master a discipline is a choice. Not all firms are great at marketing. Not all firms choose to be great at operational excellence or for that matter at consistently developing great leaders. Hence, to excel at innovation is also a choice. Nobody is forcing firms to be great at innovation; especially not the firm's competitors. So, the leaders have to make a wholehearted commitment to excel at it.

Mastery requires a cadre of experts to lead the way.

Not everyone in the firm is a finance expert. Not everyone in the firm is a HR expert. Hence, not everyone in the firm will want to be an innovation expert. Yet, like how enterprises created six-sigma masters and experts internally, firms need to create a similar cadre of innovation experts. Very few firms have developed these internal experts in innovation. We need to remember that having a great R&D group does not automatically result in innovation.

Mastery requires a broad-based understanding of principles and methods.

While most inventions come from individuals or small groups of 2 or 3 people, a vast majority of innovations are a result of a community effort. Hence broad knowledge about the *lingua franca of innovation*—principles, frameworks, concepts and tools—enterprise wide is imperative. Today, in most enterprises we expect all employees to have some rudimentary knowledge or skill in the concepts and tools of all major management disciplines – finance, marketing, operations etc. Innovation is no different. Unfortunately, this does not exist in most firms today.

Mastery requires years of effort.

It takes years to master any discipline. You master a discipline through discipline (purposeful practice, rigor, patience and perseverance). Fortunately, the journey to master any discipline is the same: Knowledge → Practice → Discipline. There are no short cuts and no magic bullets. Yet, in reality I regularly encounter executives that expect employees to be magically innovative without any formal training and/or practice.

Mastering any discipline is like mastering a language. Most of us are quite happy to acquire conversational skills in a second language and rarely try to gain expertise. Similarly, most firms are quick to learn a few of the foundational skills of innovation. But it is not sufficient to set them apart in the competitive landscape. However, mastery and expertise in innovation is still a rarity among enterprises.

Mastery requires both Discipline and Culture

Executives who are genuine and serious about innovation are asking serious questions: "How do you innovate? How do you invest in R&D? What processes do you set up in the firm for innovation? How can we measure innovation?" These are necessary questions; but, not sufficient. Unfortunately, one cannot make people creative and innovative. The only thing executives can do is to create a climate where people can be naturally creative. So, at the heart of innovation is the corporate culture.

Innovation is a social science like marketing, leadership and psychology. While accounting, finance, and IT are formal sciences that are governed by logic and rules. Physical or life sciences obey the laws of nature. However, in social sciences there are no rules or laws. Social sciences have general principles, frameworks, tools, concepts etc. Unfortunately, thus far, several executives and firms have been approaching innovation as though it is a formal science like quality and/or physical science like biology or chemistry. So, firms are still using the wrong tools, wrong techniques

and wrong resources to manage innovation. Further, in several industries, innovation is narrowly defined as R&D and invention. This directly leads these firms to take very structured approaches towards innovation that eschews all the creative, artistic and humanistic elements that are central to innovation in general. All of this is leading to all the poor results and frustration.

The previously mentioned 2007 McKinsey innovation report, based on a survey of nearly 1400 executives from around the world showed that 94% of the executives agreed that *people* and *corporate culture* were the most important drivers of innovation. In another major study of 759 firms across 17 major economies, "Corporate Culture" was found to be the primary driver of radical innovation[7]. Booz Allen has been surveying the Global 1000 firms and reporting on them since 2005. In their 2011 report[8], they concluded:

> "The elements that make up a truly innovative company are many: a focused innovation strategy, a winning overall business strategy, deep customer insight, great talent, and the right set of capabilities to achieve successful execution. More important than any of the individual elements, however, is the role played by corporate culture — the organization's self-sustaining patterns of behaving, feeling, thinking, and believing — in tying them all together."

Unfortunately, the same study revealed that only about half the responding firms said that their corporate culture robustly supports their innovation strategy. Further, about the same proportion said that their innovation strategy was aligned with their corporate strategy.

Treating innovation as a discipline is necessary but not sufficient. However, approaching innovation as a discipline in combination with a culture of innovation is an unbeatable combination.

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7 Radical Innovation Across Nations: The Preeminence of Corporate Culture, Journal of Marketing, Jan. 2009

8 The Global Innovation 1000, Why Culture is Key, Issue 65, Winter 2011

Who will benefit from reading this book?

Executives who accept this book's central message will stop annoying employees and shareholders with empty rhetoric about "being innovative" and begin building a solid, manageable discipline of innovation within their enterprises.

Once they read this book, you'll recognize that creative ideas, resources, processes, and metrics are just parts of a broader discipline called innovation that can be taught, learned, practiced, perfected and predicted.

Any enterprise that benefits from genuine innovation—in the development of physical products, services, or in the improvement of internal process—can benefit from the central thesis of this book. Companies that have mastered the discipline of quality and continuous improvement may get the most from it.

This book will also help executives that already deem innovation as important, but do not know how to get started on "the journey" towards creating a "culture of innovation." It will also help those who have already started the journey, but are not getting the results that they were expecting.

Layout of the book

At this stage, if you still wish to continue reading this book, it is laid out as described below.

The rest of the book is written as a dialog between a professor at a reputed business school and a skeptical executive. The dialog offers a simple and systematic approach for learning several fundamental concepts of innovation and answers numerous questions that executives usually harbor as they are exploring new management fads and are contemplating embarking on a new journey of navigating change within the firm.

As Edward Deming said, survival is not mandatory. Similarly, nobody is forcing a firm to be innovative. So, innovation is a choice. If chosen as a strategic competitive weapon, innovation has to be approached with the same intentional fervor as any major management initiative – Strategic Planning, ERP implementation or Six-Sigma. But still most executives believe that it is a peripheral activity or a luxury. So, in each chapter of this book are key leadership questions, decisions and choices that the executive reader will be forced to ponder and reflect upon.

The following paragraphs briefly cover the main takeaway from each of the book chapters.

Chapter 1 – The Desire for Change

Chapter 1 describes an executive that is plagued with a feeling of helplessness because the future prospects for the enterprise he runs are not promising. While the executive is convinced that what made the firm successful to this day is not what is going to make them successful going forward, he is quite unsure as to how he can break out of the status quo.

Chapter 2 – Innovation is Different

Chapter 2 points to one of the fundamental differences between innovation and all other management philosophies that have preceded it and those that were wholeheartedly embraced and adopted by most businesses. Specifically, clear distinctions are made between the concepts of quality and innovation and between incremental and radical innovation.

Chapter 3 – The Discipline of Innovation

Chapter 3 delves into the fact that innovation is a *discipline*. It is a body of knowledge like any other – quality, finance,

marketing, bio-chemistry etc. Most importantly like all disciplines, innovation can be managed as a deliberate, comprehensive and strategic management function. So, it is not magic. It is not luck. Fortunately, the journey an enterprise has to undertake to master any management discipline is the same. This journey consists of three steps: Knowledge, Practice and Perserverance.

Chapter 4 – the Practice and Dynamics of Innovation

Chapter 4 delves into the practice and dynamics of innovation. All innovation happens in a community and the fundamental basis for the superior performance of any community is a common language. Every discipline—medicine, chemistry, law—has its own *lingua franca*. Each *lingua franca* has its own structure, its own principles, concepts and tools. So does Innovation. The first step to create a community of innovators is to teach them the *lingua franca* of innovation. Only then can the community be able to practice and master the discipline of innovation. This chapter also makes clear distinctions between the concepts of risk, uncertainty and ambiguity and how firms should approach and manage their portfolio of innovation projects based on those differences.

Chapter 5 – The Culture of Innovation

Chapter 5 outlines the journey of creating a culture of innovation within the firm. The creation of a true and pervasive culture of innovation in an enterprise, department or team, will bear multiple fruits. This chapter introduces the 6 fundamental foundation blocks that firms have to build to implement a culture of innovation—Values, Behaviors, Climate, Resources, Processes and definition of Success.

Chapter 6 – Starting the Journey

Chapter 6 looks at our current understanding about how *learning* happens. Innovation is about continuously learning and uncovering the "unknown." We look at how individuals learn and how firms learn. This chapter describes the limits of existing knowledge and how current knowledge limits a firm's ability to learn. Finally, in this chapter we assert that firms will die when they stop learning.

Acknowledgements

We wish you luck and lots of discipline.

Enjoy *The Journey*!