Innovation: A Manager's Primary Task

Asterios G. Kefalas, Ph. D
Professor of Management, Emeritus
College of Business Administration
The University of Georgia
Athens, Georgia 30603, USA
akefalas@uga.edu
www.terry.uga.edu/~akefalas
www.kefalas.biz

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Abstract

The perception of innovation as the introduction of new and expensive technologies associates this vital condition of competitiveness with high operational risk. As a result a lot of businesses hesitate to risk economic resources in innovative efforts that are proposed by their associates or external advisers. For many the innovation is something that can be characterized as a luxury. It is something that it would be good to have but it is dangerous. This paper demystifies innovation by making it an integral part of operational life and the most important component of success. Embracing innovation as the fundamental task or duty the leader of the enterprise promotes success while fighting or ignoring it prompts the enterprise to failure.

The paper provides three new important perspectives for senior managers:

1. Innovation, like many business functions, is a management process that requires specific tools, rules and disciplines-- it is not mysterious.
2. Innovation requires measurement and incentives to deliver sustained, high yields.
3. Companies can use innovation to redefine an industry by employing combinations of (a) business model innovation and (b) technology innovation.

In this paper we will explore the nature of the process of combining the conventional emphasis on "technology-centered innovation" with the new "technology and business model innovation." This new paradigm requires new managerial skills. The new paradigm represents a shift from the conventional "Problem-Solving-Reactive" (PSR) managerial skills to "Opportunity-Identification-Problem-Avoidance-Anticipatory" (OIPAA) managerial skills.

Key words: Innovation, business model, anticipatory management skills.

Innovation: A Manager's Primary Task

INTRODUCTION

The perception of innovation as the introduction of new and expensive technologies associates this vital condition of competitiveness with high operational risk. As a result a lot of businessmen hesitate to risk economic resources in innovative efforts that are proposed by their associates or external advisers. For many the innovation is something that can be characterized as a luxury. It is something that it would be good to have but it is dangerous. The book **Making Innovation Work: How the Manage It, Measure It, and Profit from It,** (Davila, Epstein and Shelton, 2006), demystifies innovation by making it an integral part of operational life and the most important component of success. Embracing innovation as the fundamental task or duty the leader of the enterprise promotes success while fighting or ignoring it prompts the enterprise to failure.

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THE NEW INNOVATION: A CONCEPTUAL REVOLUTION

Traditionally managers have learned in schools and by experience that all issues that they are entrusted with can be conceived off as "constrained maximization problems." The basic idea, advanced during the early sixties, is that the primary task of a manager is to maximize some variable, called the **Objective Function (Z),** subject to a number of **Constraints**. These constraints represent limited in the technological and financial capabilities of the organization. As Figure 1 shows the objective function Z is a function of two factors: x and y. These two factors, Technology and Economics, are the two main Constraints that determined the set of feasible solutions.

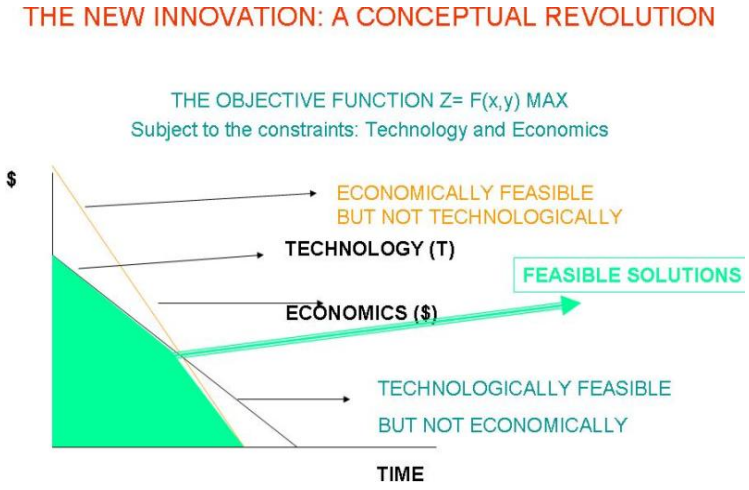


Figure 1. The Constrained Maximization Problem

Projects that fall within their boundaries are both technologically possible and are also economically sound.

During the last two-to-three decades the world has experienced tremendous progress in both of these constraints. Both the "old" energy- based and physical technology, i.e., machines that facilitate the movements and processing of material objects as well as the "new" information-based, i.e., machines that facilitate the gathering, processing and communicating information made spectacular advances. Today the combined use of these two technologies performs tasks that are literally miraculous. The result of these advances has been a "shift" of the technology constraint to the right thus increasing the number of technologically feasible solutions.

The same developments took place in the economic constraint. The continuous declines of the interest rates and the ease of finding funds via the stock market lead lowering of the cost of capital. As a result there has been a shift of the economic constraint to the right, thus making more projects economically feasible. The ultimate result of these two shifts has been a great enlargement of the Feasible Solutions area that is depicted in green in Figure 1.

The Innovation Paradox

Despite these tremendous improvement in technology and finances there is today as much "concern" about innovation, or the lack of it, as it was half a century ago. One cannot help but ask "why is it so?" Why is it that despite the easing of these constraints and despite all the "help" offered by governments around the globe business leaders are today as reluctant to invest in new process and products as they ever were? Are we missing something in our conceptual apparatus that we use in our attempts to understand the way business leaders make decisions about devoting organizational resources in innovation? The quick answer is a sounding YES!

What is missing is a third dimension in the set of constraints. Constraints are very important. Herbert A. Simon, a Nobel Laureate in Economics and a pioneer in decision sciences and artificial intelligence, used to say in his numerous speeches "If you let me set the constraints I don't care what kind of goals you choose to pursue." Humans are notorious about their inability to conceive more than two dimensions when they study complex phenomena. The two dimensions that we dealt, with which are the two constraints, are **variables**. Furthermore these two variables are related. Cheaper capital makes investment in R&D that lead to new technologies more affordable and vice-versa. This preoccupation with these two interrelated variables blindsided scholars and practitioners for too long. Implicitly it was assumed that leaders and managers always desire to innovate. In addition it was taken for granted that these leaders see innovation as a strategy that will enable the enterprise to set and accomplish ever more ambitious goals.

The Importance of the Management Mindset

Recently a groundswell of suspicion begun to develop that this assumption cannot be taken for granted. Indeed many authors seem to believe that management is hostile toward innovation. Some authors allude to management's inherent risk aversion as the reason for their unwillingness to innovate. (Barker, 1993, Christensen, 1997, Foster and Kaplan, 2991, Hamel, 2000, Page, 2008). Others blame the equally inherent western attitude toward short term results and the avoidance of taking a long-term perspective. Finally management itself offers the lack of appropriate human resources, government bureaucracy, and lack of appropriate incentives that promote "high risk low immediate profitability decisions" and so on. What ever

the reason we argue here that there is another constraint in an organization's ability and willingness to innovate. Unlike the previous two constraints that are considered as variables this new constraint is an **invariant**. In mathematics, an invariant is something that does not change under a set of transformations. (Wikipedia, the free encyclopedia)

Figure 2 adds this new constraint to the other two that were depicted in Figure 1. The new constraint is of the type of an invariant and is depicted in Figure 2 in red and has the label The Invariant: The Executive's Conceptual Model. This expression is used in lieu of the expression Business Model. The choice of the expression is designed to avoid the stigma associated with the expression "business model" which in our opinion is overused and to some extend misused. Alternatively the choice of the expression "The Executive's Conceptual Model" reflects our personal bias for wishing to zero in the executive as the key "Change Agent" and the ultimately responsible for making the decision to create an innovation-driven corporate culture and to initiate a philosophy of innovation as a strategic weapon. Our experience has taught that

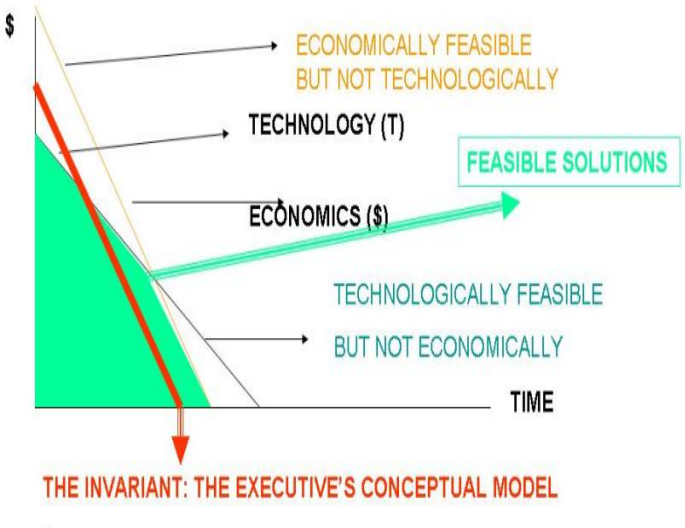


Figure 2. The Innovation Invariant

our attempts to convince organizations to become innovative by performing a series of public seminars and/or in-house workshops aimed at the middle manager's levels are exercises in futility. It is the top man or woman that must make innovation a central piece of his or her mindset.

Anticipation: A Strategy for Shifting the Invariant to the Right

As can be seen from Figure 2 the invariant is to the left of the other two constraints. Consequently it renders infeasible some of the previously feasible solutions. As with the conventional constraints (Technology and Economics) in order to create more feasible solutions there must be a shift to the right. Our task therefore is to find a tool that would enable the executive to see the world differently. The tool we offer here is called anticipation. Barker (1993) in popular book **Paradigms** uses Kuhn's (Kuhn, 1970) concept of a Paradigm as "accepted examples of actual scientific practice, examples which include law, theory, application, and instrumentation together—[that] provide models from which spring particular coherent traditions of scientific research…men whose research is based on shared paradigms are committed to the same rules and standards for scientific practice," and defined a paradigm shift as a change in the fundamental rules of an activity. [Page 33] Using this concept of a paradigm shift he then offers a new framework for the manager of the 21st century. This framework consists of three keys to the future of organizations. These keys are:

A. Anticipation
B. Innovation
C. Excellence.

Excellence gives organizations a competitive edge. Innovation is the way the organization gains a competitive edge. And Anticipation provides the manager with the information that allows the organization to be in the right place at the right time with excellent innovative products or services.

To accomplish the task of surviving and prospering in the 21st century the leaders of organizations must develop a new philosophy or a new mindset, a new way of looking at the world around them and the role of their organizations in it, and acquire new managerial skills. The new mindset is a future-oriented mindset. Some forty years ago in 1970 Alvin Toffler published his now classic Future Shock. The book demonstrated the importance of trying to anticipate the future, to understand potential long term implications of change, both positive and negative, before they occurred. Ten years later Peter Drucker (Drucker, 1980) brought to the manager's attention the relationship between changes in the environment, or as he called it, the "times" and the skills that managers needed to cope with these changes.

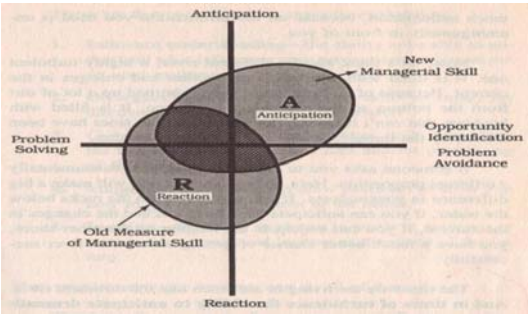


Figure 3. New Measure of Managerial Skills
Source: (Barker1993), p. 27

As can be seen from Figure 3 during "normal" times managers engage in activities that are essentially Problem Solving. Somehow, somebody, somewhere, has identified a problem and the manager is asked to "solve" it. The manager's mode of operation is **reactive. [R**]. In turbulent times, and Drucker considered the decades of the seventies and the eighties turbulent, the ability to anticipate enhances the chances of success. Thus managers must shift their attention away from problem solving and toward Opportunity Identification and Problem Avoidance. One of the basic propositions of the proponents of the New Economy is the dictum "Don't solve problems create opportunities." The managerial skills now revolve around **Anticipation [A].** In searching for opportunities the manager must begin looking outwards to the external environment of the organizations. The manager must engage in Environmental Scanning, i.e., the art of acquiring information about the things that are happening in the world around the organization. (Schoderbek, Kefalas, and Schoderbek, 1995).

Global Innovation Outlook

"The nature of innovation is changing at a pace unheard of in modern history -- it is now increasingly open, collaborative, multi-disciplinary and global. And to reap the benefits of this evolution, an organization's processes and practices must adapt. Enter the Global Innovation Outlook (GIO), where we have opened up our technical and business forecasting processes to include external leaders from business, academia, the public sector, NGOs and other influential constituents of the world community. The GIO takes a deep look at some of the most pressing issues facing the world and works toward providing solutions to those needs.

Now in its second iteration, the GIO has significantly expanded its efforts to seek the most fertile ground for innovation and attention, and is continuing to work with a wide array of participants to identify potential projects and initiatives to change business, society and the world for the better.

In 2005 and 2006, the GIO 2.0 gathered **248** thought leaders from nearly **three dozen** countries and

regions, representing **178** organizations across **four** continents for 15 "deep dive" sessions to discuss three focus areas and the emerging trends, challenges and opportunities that affect business and society:

- The future of the enterprise
- Energy and the environment

Transportation and mobility

Rather than thinking of these topics in terms of established sectors or vertical markets, the deep dive sessions approached them as broad, horizontal issues that could affect virtually every enterprise and organization on the planet. This initiative represents something that is uniquely IBM: A combination of world-class technology leadership and deep expertise in business and industry. Deep relationships with a broad range of clients, governments, universities and other ecosystem members around the world. A willingness to elevate the dialogue around important issues and examine the broad implications for the world."

[To learn more about GIO 2.0, read the GIO 2.0 report, (http://domino.research.ibm.com/comm/www_innovate.nsf/images/gio/$FILE/GIO_2005.pdf) or ask your IBM contact for a copy and begin a conversation about what the changing nature of innovation means for you and your organization.]

GIO 1.0

In 2004, over the course of 10 meetings in 24 days on 3 continents, more than 100 leaders from business, academia, government, and other organizations joined with IBM's top researchers and consultants to examine three areas that affect broad swaths of society and are ripe for innovation:

- The future of healthcare
- The relationship between government and its citizens
- The intersection of work and life.

Here is what the GIO has found:

"In fact, the most essential finding of the first GIO, which was conducted in 2004, might be that innovation is no longer invention in search of purpose, no longer the domain of a solitary genius looking to take the world by storm. Instead, innovation is increasingly:
Global. The widespread adoption of networked technologies and open standards is removing barriers of geography and accessibility. Anyone and everyone can participate in the innovation economy.
Multidisciplinary. Because the challenges before us are more complex, innovation now requires a diverse mix of talent and expertise.
Collaborative and open. More and more, innovation results from people working together in new and integrated ways. Within this collaborative environment, notions of intellectual property are being re-examined. And those entities that view intellectual assets as "capital" to be invested and leveraged—rather than "property" to be owned and protected—will likely reap the greatest returns.

The World's Most Innovative Companies

Are there any companies that have taken advantage of these changes in the world of innovation and created new processes and products that have been successful? Again a quick scanning will reveal a large number of business enterprises around the globe that fall in the category of successful innovators. Below we present

a few examples from the Business Week and Boston Consulting Group ranking of the world's most innovative companies.

What is Innovation

"Today, innovation is about much more than new products. It is about reinventing business processes and building entirely new markets that meet untapped customer needs. Most important, as the Internet and globalization widen the pool of new ideas, it's about selecting and executing the right ideas and bringing them to market in record time. In the 1990s, innovation was about technology and control of quality and cost. Today, it's about taking corporate organizations built for efficiency and rewiring them for creativity and growth. "There are a lot of different things that fall under the rubric of innovation," says Vijay Govindarajan, a professor at Dartmouth College's Tuck School of Business and author of *Ten Rules for Strategic Innovators: From Idea to Execution*. "Innovation does not have to have anything to do with technology." The new ranking has companies evoking all types of innovation. There are technology innovators, such as BlackBerry maker and newcomer Research In Motion Ltd. (**RIMM**), which makes its debut on our list at No. 24. There are business model innovators, such as No. 11 Virgin Group Ltd., which applies its hip lifestyle brand to ho-hum operations such as airlines, financial services, and even health insurance. Process innovators are there, too: Rounding out the ranking is Southwest Airlines Co. (**LUV**) at No. 25, a whiz at wielding operational improvements to outfly its competitors."

Obstacles to Innovation

"The No. 1 obstacle, according to our survey takers, is slow development times. Fast-changing consumer demands, global outsourcing, and open-source software make speed to market paramount today. Yet companies often can't organize themselves to move faster, says George Stalk Jr., a senior vice-president with BCG who has studied time-based competition for 25 years. Fast cycle times require taking bets even when huge payoffs aren't a certainty. "Some organizations are nearly immobilized by the notion that [they] can't do anything unless it moves the needle," says Stalk. In addition, he says, speed requires coordination from the hub: "Fast innovators organize the corporate center to drive growth. They don't wait for [it] to come up through the business units."

Indeed, a lack of coordination is the second-biggest barrier to innovation, according to the survey's findings. But collaboration requires much more than paying lip service to breaking down silos. The best innovators reroute reporting lines and create physical spaces for collaboration. They team up people from across the org chart and link rewards to innovation. Innovative companies build innovation cultures. "You have to be willing to get down into the plumbing of the organization and align the nervous system of the company," says James P. Andrew, who heads the innovation practice at BCG. Procter & Gamble Co. (**PG**) (No. 7) has done just that in transforming its traditional in-house research and development process into an open-source innovation strategy it calls "connect and develop." The new method? Embrace the collective brains of the world. Make it a goal that 50% of the company's new products come from outside P&G's labs. Tap networks of inventors, scientists, and suppliers for new products that can be developed in-house.

Asking the Right Questions

Coordinating innovation from the center is taken literally at BMW Group (**BMW**), No. 16 on the list. Each time BMW begins developing a car, the project team's members -- some 200 to 300 staffers from

engineering, design, production, marketing, purchasing, and finance -- are relocated from their scattered locations to the auto maker's Research and Innovation Center, called FIZ, for up to three years. Such proximity helps speed up communications (and therefore car development) and encourages face-to-face meetings that prevent late-stage conflicts between, say, marketing and engineering. In 2004 these teams began meeting in the center's new Project House, a unique structure that lets them work a short walk from the company's 8,000 researchers and developers and alongside life-size clay prototypes of the car in development.

What are the Metrics Are Used?

Managers are scrambling to come up with ways to measure and raise the productivity of their innovation efforts. Yet the *BusinessWeek*-BCG survey shows widespread differences over which metrics -- such as the ratio of products that succeed, or the ROI of innovation projects -- should be used and how best to use them. Some two-thirds of the managers in the survey say metrics have the most impact in the selection of the right ideas to fund and develop. About half say they use metrics best in assessing the health of their company's innovation portfolio. But as many as 47% said measurements on the impact of innovation after products or services have been launched are used only sporadically. Actually, most managers in the survey aren't monitoring many innovation metrics at all; 63% follow five gauges or fewer. "Two or three metrics just don't give you the visibility to get down to root causes," says BCG's Andrew. Then there are companies that track far too many. Andrew says one of the top innovators on our list -- he's mum as to which one -- collects 85 different innovation metrics in one of its businesses. "That means they manage none of them," he says. "They default to a couple, but they spend an immense amount of time and effort collecting those 85."

The sweet spot is somewhere between 8 and 12 metrics, says Andrew. That's about the number that Samsung Electronics Co. uses, says Chu Woosik, a senior vice-president at the South Korean company. Chu says the most important metrics are price premiums and how quickly they can bring to market phones that delight customers. Samsung also watches the allocation of investments across projects and its new-product success ratio. That, Chu says, has nearly doubled in the last five years. "You want to see it from every angle," he says. "A lot of companies fall into the trap that they thought things were really improving, but in the end, it didn't work out that way. We don't want to make that mistake."

The Role of the CEO

Only a CEO can change a business culture at top speed, and in Alan G. Lafley, P&G has its own innovator-in-chief. Lafley sits in on all "upstream" R&D review meetings, 15 a year, that showcase new products. He also spends three full days a year with the company's Design Board, a group of outside designers who offer their perspective on upcoming P&G products. "He's sort of the chief innovation officer," says P&G's Huston. "He's very, very involved." That sort of support from the CEO is essential, says Jon R. Katzenbach, co-founder of New York-based management consultancy Katzenbach Partners LLC. "The CEO determines the culture," he says. "If the CEO is determined to [improve] the surfacing of ideas and determined to make critical choices, then the chances of an [organization's] figuring that out are much, much greater."

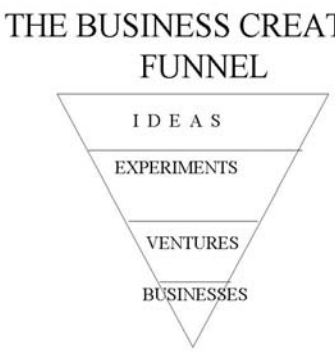
Mike Lazaridis, president and co-CEO of Research In Motion, hosts an innovation-themed, invitation-only "Vision Series" session in the Waterloo (Ont.)-based company's 100-seat auditorium each Thursday. The standing-room-only meetings focus on new research and future goals for the company that gave us the BlackBerry. Lazaridis is likely the only chief executive of a publicly traded company who has an Academy Award for technical achievement. (He won it in 1999 for an innovative bar-code reader that he helped invent that expedites film editing and production.) He has donated $100 million of his own money to fund a theoretical physics institute and an additional $50 million to a university quantum computing and nanotechnology engineering center in Waterloo. He has even appeared in an American Express (**AXP**) commercial, scratching complex equations across a blackboard while proclaiming his commitment to the creative process. "I think we have a culture of innovation here, and [engineers] have absolute access to me," says Lazaridis. "I live a life that tries to promote innovation." As the *BusinessWeek*-BCG survey demonstrates, it is a life every manager around the world must embrace."
www.businessweek.com/innovation

A NEW APPROACH TO INNOVATION

What are the "lessons" we could draw from the extensive review of what's happening in the world of innovation globally and what global companies are doing to keep up with these trends? Let's summarize very quickly the main lessons.
Lesson 1. Innovation isn't just invention, creativity or technology. It is interdisciplinary.
Lesson 2. Innovation isn't luxury. It is a necessity.
Lesson 3. Innovation is a managerial task. It is a collaborative and open managerial process.
Lesson 4. Innovation is a global issue. Everybody has access to everybody else's resources.
Lesson 5. The role of the CEO is pivotal in the innovation Process.
Lesson 6. Lack of coordination is the biggest obstacle in innovation.
Lesson 7. Most management processes are controlled by the defenders of the past.

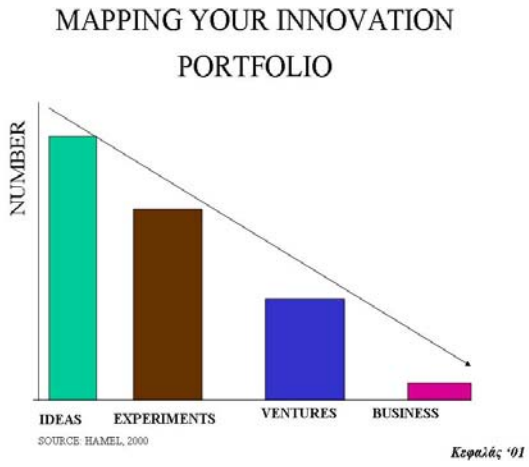
It should be very obvious that we are in desperate need for a paradigm shift. The corporate world must embrace a new way of looking at the entire issue of innovation. Organizational leaders must adopt a habit of looking forwards. They must learn to drive by looking though the windshield rather than looking at the rearview mirror. Searching continually the external business environment for constraints, threats and opportunities must become the manager's primary task. Anticipatory management rather than reactionary management must become the norm. The captains of the 21st century organizations must govern their ships by looking ahead to see what's coming around the corner and contextualize it and observing the wake that their ships leave behind. If the waters that the ship leaves behind are muddy that is an indication that they sail in sallow waters. If the waters are black that is an indication that heir engines burn too much oil. It is this constant "clear ahead and behind" that must be the 21st century managerial mantra. Frankly that must become every organizational member's mantra not just the manager's. There is no room for plain passengers in the 21st century organizational ships that sail in turbulent waters.

Before going into the detail description of the wheel of innovation we offer in Figure 4 below a simplified version. As can be seen from the figure the entire process resembles a funnel through which many ideas are sifted continually until a few of them become real business projects. Obviously the existence of ideas is a necessary condition but it is by no means sufficient. The sufficient condition is provided by the existence of the performance of experiments tat will lead some promising projects that become ventures which



eventually will end up been business. The simple logic of the funnel is that the more ideas a company generates the high the probability that some of them will pass the sieve to experimentation. It is likely that some of these ideas will be simple fantasies and will therefore waste organizational resources for experimentation. However, Hamel quotes Bill Gross, founder of Idealab, who advises that "If you kill an idea soon enough, you can take the knowledge you gain from the experiment and apply it somewhere else. So we learn something from every idea…and we love killing an idea if we learn something from it." (p. 301).

Figure 4. The Business Creation Funnel.



Since the existence of ideas is so important Hamel recommends the development of a series of portfolios starting with an Idea Portfolio, Experiment Portfolio, and ending with a Ventures Portfolio. Figure 5 below presents the process of mapping of an innovation portfolio. Again the number of true business projects will depend on the number of ideas organizational members create. The responsibility for creating must permeate the entire organization. Innovation is not a spectators' game. There must be no room for just observers in a dynamic organization. Innovation is everybody's business; not just the engineers and the managers.

Figure 5. The Innovation Portfolio

The Wheel of Innovation

Hamel in his **Leading the Revolution** (Hamel, 2000) describes a very novel approach to innovation. He calls it the Wheel of Innovation (pp. 293-314). He says that "Innovation is a dynamic process, with the following elements:

- Heretics and novelty addicts *imagine* new possibilities
- Using the principle of business concept innovation, they *design* coherent business models around those ideas.
- The launch small-scale *experiments* to test the viability of their business concepts and then adapt them.
- Having conducted an experiment or two or three, they *assess* what has been learned.

- Depending on what has been learned, they decide whether to *scale up* or go through another experiment cycle.

Imagine, Design, Experiment, Assess, Scale. This is the wheel of innovation." As can be seen from Figure 6 the success of a company's innovation effort will depend on the speed of the wheel. The faster the company's cycle Experiment, Assess, Adapt is the more ideas will turn into business.

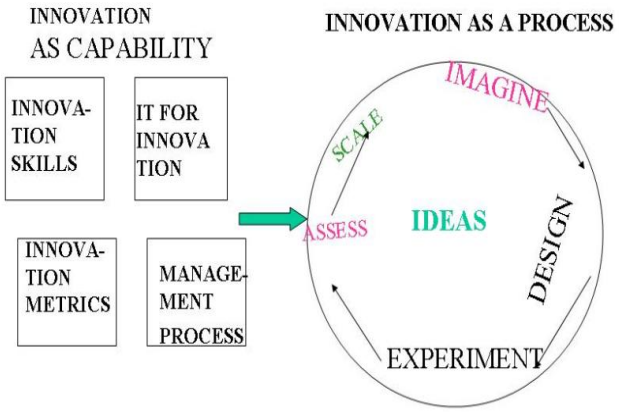


Figure 6. The Wheel of Innovation
Source: Hamel, 2000, p. 294

INNOVATION: THE NEW BUSINESS MODE

It was mentioned repeatedly that innovation is a process that permeates the entire organization. In this paper we placed considerable emphasis on the role a manager and the CEO must play in order to shift the invariant that limits considerable feasible solution. We now close this paper with a business model that shows how certain innovation rules that embody desirable goals and the standard management tools. The book **Making Innovation Work: How the Manage It, Measure It, and Profit from It,** (Davila, Epstein and Shelton, 2006), demystifies innovation by making it an integral part of operational life and the most important component of success.

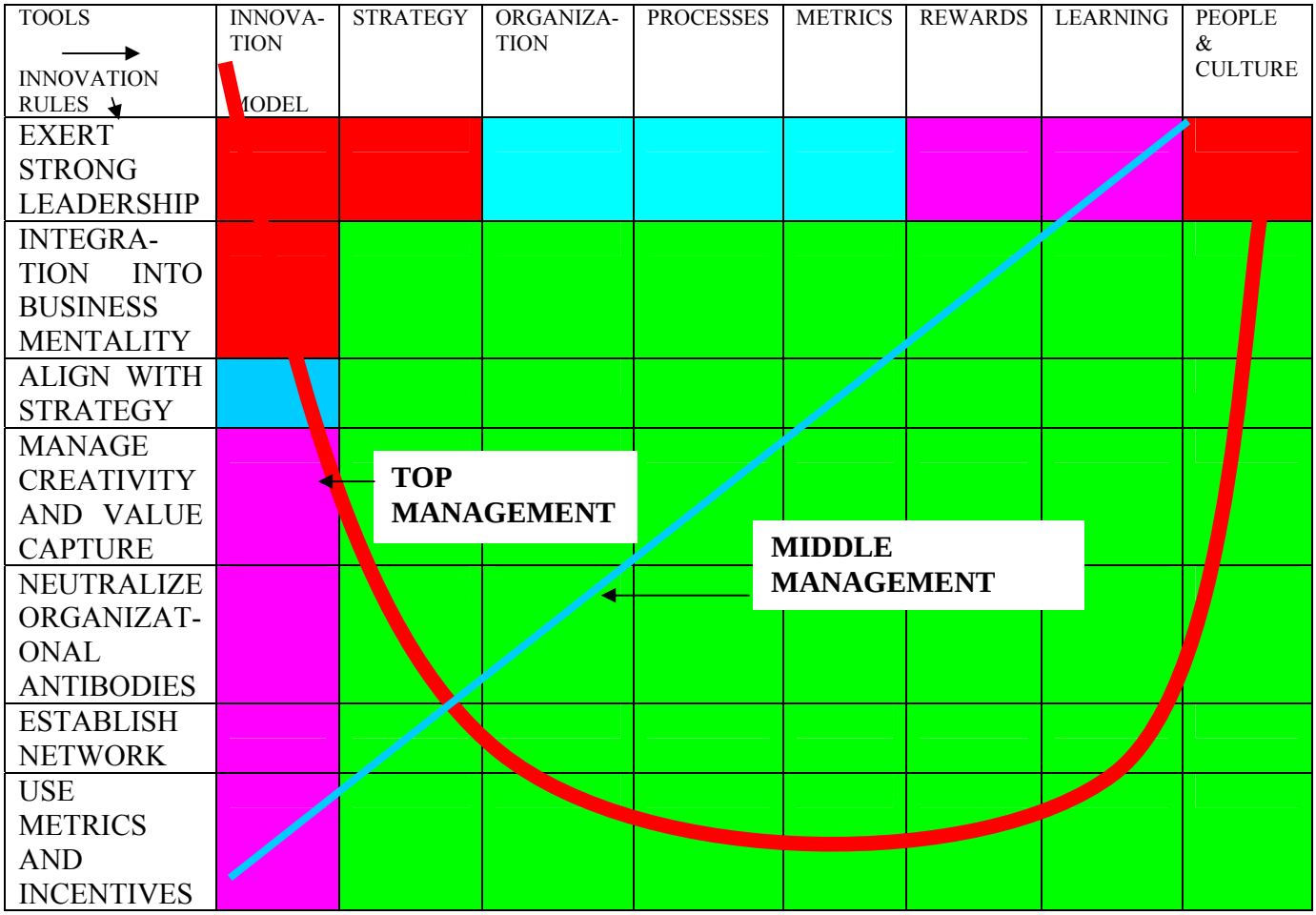


Table 1. The Innovation Business Model. (Adapted from: Davila, Epstein and Shelton, 2006)

Table 1 shows "what" (Innovation Rules) and "how" (Management Tools) must be done for an innovation effort to be successful.

The first step that must be done is the determination of the role of leadership. The leadership team under the direction of the CEO has three initial activities to undertake to set the context for any change to innovation. (pp. 264-267) These activities are:

1. Leadership must define the Innovation Strategy and link it to the Business Strategy.

2. Innovation Must Be Aligned with the Company Business Strategy, Including Selection of the Innovation Strategy.
3. Leadership Must Define Who Will Benefit from Improved Innovations

The second step is the performance of an Innovation Diagnostic. Leadership needs to insure that innovation is part of the company's business mentality. Typical diagnostics will include for example Strategy, Processes, Resources and Organization. The purpose of the diagnostic is leadership's assessment of the company's innovative capabilities and its current situation. Marc Benioff, CEO Salesforce.com, requires that all new initiatives and products be reviewed using V2MOM management tool. This acronym comes from

- **V**ision: What do you want?
- **V**alue: What's important about it?
- **M**ethods: How do you get it?
- **O**bstacles: What is preventing you from getting it?
- **M**easures: How will you know when you got it? (p. 268)

Benioff believes that the CEO should set the context for innovation and should supply the overall mandate to allow the organization to take risk; this provides the basis for incremental as well as semi-radical and radical innovations. (p.269)

CONCLUSION

The main message is that contemporary businesses must adopt the following attitude:

1. Innovation does not require revolutionary activities inside the company. What is required are well organized administrative activities and an efficient organizational structure.
2. Innovation is not alchemy with mysterious reactions. It is simply one of the basic operational activities.
3. Innovation is not mainly creativity and existence of "creative culture." A lot of enterprises find that to create a lot of ideas it is not difficult. The difficulty lies in turning ideas into processes and products.
4. Innovation is not only processes and tools. These are necessary but not sufficient. They must be supplemented with good organization, measurements, and remunerations systems that can make things happen.
5. Innovation does not focus exclusively in "cool" new technologies. Developing new business models and new strategies is more important—sometimes more so. And finally,
6. Innovation is not essentially something that each enterprise needs in large quantities. Innovation must match the opportunities and the competencies of the organization.

In sum, the basic philosophy of new innovation can be summarized in two propositions.

- Innovation is the basic component for a continuous success. It protects your physical and intellectual assets from the continuous erosion cause by the market changes.
- Innovation is a basic part of enterprise and as such must be managed consciously as all the other operational activities. It is not a thing of luxury that sprouts by itself but is something that must be cultivated methodically and conscientiously.

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