

## Key Influences on Managerial Creativity and Organizational Innovation for Knowledge-based Organizations: Three I's to Value

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### Abstract

*The increase in economic distress and the uncertainty of other environmental factors have resulted in renewed interest in the value of innovation as a means to improve the market positions of firms worldwide. Corporations are generally not perceived as entrepreneurial, as this suggests a lead founder, whose venture evolves as a simple structure with an opportunity to meet some idea-generated need, whereas large organizations may be well-established, with hierarchical levels of multiple functions formed to meet organizational objectives. However, the mindset of larger entities may need to resemble that of an entrepreneur, to ensure sustainable competitive advantage. Managerial creativity and organizational innovation, along with the influence of perpetual intrapreneurship on the strategic design and structural processes within knowledge-based organizations are analyzed. The effect of leadership and culture on organizational innovation and strategic activities across the pharmaceutical industry are evaluated. Strategies to integrate intellectual capital, innovation, and intrapreneurship as a framework, are proposed.*

**Key Words:** Creative, Creativity, Entrepreneur, Entrepreneurship, Innovation, Innovative Leader, Intellectual Capital, Intrapreneur, Intrapreneurship, Knowledge-based, Leadership, Organizational Capability, Pharmaceutical, Strategy

### 1. Introduction

In the knowledge economy, organizations must continually improve their strategies for applying creative mechanisms to acquire and disseminate knowledge and to transform it into intellectual capital as a key intangible asset. This competing structure suggests that creativity and innovation are major initiatives for building increased performance and continuous organizational learning over the long-term. In order to maintain excellence within organizations, it is imperative to manage behaviors in an innovative way to exploit organizational capabilities, to promote creativity, and thereby to endorse intrapreneurship.

### 2. Examples of Innovative Strategies

There are several examples as to how organizations have implemented key strategies comprised of innovative leaders and constituencies, to demonstrate high performance. One year after taking charge at Siemens-Nixdorf Information Systems, Gerhard Schulmeyer produced the merged company's first profit after losing hundreds of millions of dollars annually since 1991; he credited the turnaround to the creation of 5000 "change agent", almost 15% of the workforce, who volunteered for active roles in the company's change agenda while continuing to perform their regular jobs (Strickland & Thompson, 2004). Based on research (Boyce, 2003) conducted as to the perceptions of scientists at a prominent pharmaceutical firm, Pharmacia (PHA), organizational commitment, internal resource reputation, and an innovative work environment, were positively correlated to job satisfaction, with the creativity aspect of the innovatory work environment category when analyzed with all these intrinsic factors, confirming a significant ( $p < 0.001$ ) linear relationship to their perceptions. In their comparative study of leading economies in the Far East and Europe, Botkin, Diamancescu, and Stata (1984) have shown that the difference in the growth of productivity are explained by differing levels of capital investment in education, creativity and innovation, and also by different management practices. Numerous studies (Sjölander, 1983; de Brentani, 1991) also indicate that innovative companies succeed better than non-innovative ones, and original, high-profile products and services sell better, provided customers' quality requirements are met (Cooper, 1980; Cooper, 1984; Cooper & Kleinschmidt, 1987; and Maidique & Zirgler, 1984).

Recently, Rhodes (2009) reported how Dell® offered its followers via ‘messaging’ (i.e., using *Twitter*), deals, special offers, and discounts. This is a form of *real-time* coupons—Dell® can alert people to offers and discounts as they arise, and can modify the offers immediately when upon selling out. Based on this investigation, it is suggested that the combination of these incentives in Dell® Outlet is what makes it so successful, such that it recently generated \$3 million in revenue from its followers (Figure 1).

A high level of innovativeness seems to create significant results regardless of the function or area concern. For example, there were many studies by (Gephart, 1995) that showed that firms with innovative and inter-related human resource practices have higher levels of productivity and better financial performance than those that do not follow such practices. In addition, Lampikoski and Emden (1996) reported that by considering the top companies in the categories on the Fortune 500 list—Rubbermaid, 3M, Intel, Microsoft, and Motorola—this can be a measure of validity, as they, in recent years, have been ranked among the most innovative companies in the US. In Europe, Arthur D. Little International [ADL] (1995) found that ABB, Siemens, Phillips, LM Ericsson, and Nokia, get the highest rankings for innovativeness in the product and technology sector. More recently, ADL has proposed a *Sustainability Value Formula* that suggests *Innovation* and *Integrity* as key factors for achieving high performance, as demonstrated by such effectiveness as IBM’s sustainable product stewardship program, Vodafone’s Mobile phone-based payment project, BASF’s “Verbund” initiative, along with successes of global banking leader, HBSC, telecommunications behemoth, BT, and healthcare specialist, Novo Nordisk (Keeble, Lyon, Keeble, Clarke, & St John-Hall, 2007).

### **3. What do Innovation Strategies and Structures Tell Us?**

The important issue to understand is that organizations must be structured to build an innovative environment that is part of the overall business strategy, and have a strong leadership system in place to effectively drive the process, to which previous concepts have attested. These elements form a critical bond by creating the right environment, which help to foster new ideas and innovation. The implications is that as companies clearly define their strategy for succeeding in the changing business and entrepreneurial environments, they will have to include innovative strategies that are aligned with the goals of the organization and with the competencies and goals of the individuals (i.e., intellectual capital) who possess creative skills to employ entrepreneurial capabilities (i.e., intreprenurship) for the process.

### **4. Recommended Model—Can Innovative Leaders be Developed in a Pharmaceutical Organization?**

In the pharmaceutical company, it is imperative that a leadership system exists to guide the company and set directions for building subsequent leaders to encourage creativity and intrapreneurial behavior, in order to drive effective performance. An impressive example of an intrapreneur within a mechanistic organizational structure, who defied the rigidity of the corporate environment at Bayer, is that of Tony Bonanzino (Haller, 2008). Dr. Bonanzino demonstrated how employing a creative mindset is critical for implementing innovative success, as this *intrapreneur-turned-entrepreneur* capitalized on his creative leadership style to transform a non-performing subsidiary of Bayer, Hollister-Stiers Laboratories, to a team-oriented corporate culture with strong profitability.

Most leaders in this type of business may advance to these positions due to expertise in an area or years of experience, with no formal training in business strategies or people management techniques. However, as scientists and researchers, such leaders need to have a clear understanding and passion for the goals of the organization and be able to persuade others to use their knowledge and creativity to improve the discovery and development processes in their respective therapeutic disciplines, which suggests acquiring and nurturing an entrepreneurial inclination, and which ultimately translates into viable sustainability in pharmaceutical therapies.

Initially, aside of acquiring relevant knowledge as to strategic business/organizational management, senior-level executives should be personally involved in establishing the direction of the company and designing a structure to facilitate a strong leadership team, who will influence creativity at all levels. Leaders who develop from such inspiring and committed management can demonstrate the vision by their own behavior and attitudes where other scientists will be more inclined to use their ideas based on actions of the visionary. Since innovative leaders provide support and encouragement to the people in their groups, scientists should be given an environment where there is freedom to experiment on their mental theories and take risks to achieve continuous learning, without reprisal. In this knowledge-based business, leaders should provide various sources of information within and outside the organization to increase the learning capability and thus improve creativity.

Scientists should attend off-site conferences and seminars to enhance their knowledge, while managers and leaders provide time and space for reflecting new ideas into more innovative developments in core disease specializations, thereby allowing for an environment of intrapreneurship. Therapeutic expert franchise team and project leaders should periodically schedule meetings for presentation of compelling discoveries based on individual and team proposals for establishing new processes, mechanisms, and techniques for developing medical therapies.

#### **4.1 Culture of Creative and Innovative Teams.**

In complex and rapidly changing global markets, where flexibility, speed, and advanced technology are essential, organizations need to concentrate their efforts on implementing changes and coordinating with different groups of individuals to place some emphasis on employees' independence in performing creative activities. It is important to also realize the significance of building a culture of creative teams to expedite the innovative process for long-term success in the ever-changing knowledge economy. Smith (1997) states that the advantages of using workplace teams and team-building cannot be overemphasized in creating the innovative work environment, and that teams and teamwork have improved morale, reduced costs, and dramatically improved productivity across the world. Amabile (1998) suggests that managers must create mutually supportive groups with a diversity of perspectives and backgrounds. When teams that comprise people with various intellectual foundations and approaches to work (i.e., different and creative thinking styles), new ideas are often combined and expand in exciting and useful ways. IDEO Founder and GM Tom Kelley (2005), describes the 'Caregiver' as the foundation of human-powered innovation and with the IDEO team, suggests some observed procedural and cultural practices of the SSM DePaul Hospital of St. Louis, MO, such as to enhance client and customer experiences, by employing humanizing care as part of the environment. Various entities can operate within systems of entrepreneurial principles with networks of individuals that anticipate, and therefore, work collaboratively to create value for their end-users.

#### **5. What Can we Learn about the Culture Perspective?**

These views suggest that the interdependent teams can combine expertise, knowledge, and experience to enhance creative thinking and provide on-going innovative processes, where everyone can feel empowered to contribute. The implications of these perspectives show that the appropriate design of teams is important for creativity and effective coordination if an organization wants to increase knowledge and organizational capability as a long-term strategy. Assessment of these examples provides useful understanding as to the necessary factors for improving the organizational culture, but it is also crucial to stress that the communication networks, driven by informal structures and social media (e.g., *Twitter*, *Facebook*, *LinkedIn*), are the key facilitation mechanisms for improving an innovative strategy.

#### **6. Pharmaceutical Creative Team Structure—The I's Have It!!!!**

Creating a team environment is very imperative for pharmaceutical organizations, as this initiative builds key intellectual capital with multidisciplinary experience in research areas. Having small teams of scientists that share interests, with diverse skills, can drive the innovative process of developing new drug therapies. These individuals will possess complementary talents and abilities to suggest creative ideas for researching particular area of scientific specialization, for example, and to generate unique scientific profiles, perhaps attributable to their intrapreneurial mindset (Figure 2). Functional managers and project leaders must show commitment and support of the teams created for specific studies of a disease area, and display consistency in sharing the vision and expectations of the innovative process as defined by organizational strategies.

#### **7. Achieving and Maintaining Ingredients**

Competing in complex, turbulent business environments puts excessive stress on organizations, which are consequently, required to strategically manage their internal structures and processes to exploit intellectual capital, based on creativity and sustained innovative outcomes. Managing creativity entails a great deal of effort on the part of key leaders in knowledge-based organizations for building and supporting intrapreneurship, innovative processes, and organizational learning. These characteristics are critical for enhancing intellectual capital as a competitive advantage for long-term success in such dynamic, complex markets. Creative behaviors require skilled leadership to effectively manage for improved performance, which could be otherwise stifled by lack of support or encouragement.

It is imperative that leaders realize what conditions limit creativity, such as misalignment and inaccessibility to key resources, and ensure that the vision is consistently communicated and aligned with key core competencies to drive the innovative process; this is a key place wherein the intrapreneur can flourish and make contribution by exploring problems and opportunities to help sustain value in the discovery and development of therapeutics, for example. Although organization strategy dictates the formal structure, information and reward systems of the organization, informal patterns of interaction drive the norms and values, thus define the culture. The culture will both facilitate innovation in the organization, as well as hinder it. The cultural aspect must be monitored by management, who must also effectively distinguish between the norms and values, and the vision of the organization. Leaders need to use intrinsic motivation to ignite exceptional performance for incorporating creativity and they must be part of any initiative to accommodate change. Leaders need to consistently be involved with groups and teams to interact and share creative ideas and advocate proposals to senior management. Even if some risk-taking and precautionary measures are necessary, leaders need to provide appropriate rewards to encourage the creative behavior driving the innovative process. Knowledge-based organizations will increasingly require enhanced intellectual capital, as a competitive advantage, and without exception, pharmaceutical companies will have to strategically implement key techniques as described here for managing creativity with intrapreneurship to discover and develop innovative therapeutic products throughout the twenty-first century.

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**Figure 1: A Way to View Dell's Innovative Strategy on Twitter**



**Figure 2: Three I's to Quality Performance—Unique, Innovative Therapeutics**