Corporate Entrepreneurship and New Business Development: Analysis of Organizational Frameworks, Systematic Processes and Entrepreneurial Attributes in Established Organizations

by

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Submitted to the System Design and Management Program
In Partial Fulfillment of the Requirements for the Degree of

Master of Science in Engineering and Management

at the

Massachusetts Institute of Technology

February 2014

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Dedication

I would like to dedicate this thesis to some very special people in my life. My father Haytham A. Al-Tayyar and my mother Sahar M. Achrafieh who have provided me with all the love, care, affection and support a son could ever ask for. Without you I would not be where I am today. I love you both very much! To my brother Dr. Ahmed H. Al-Tayyar, you are and will always be an inspiration. Thank you for being the most amazing brother, I am blessed to have you in my life. To my sister Haifa H. Al-Tayyar and her husband Fahad F. Bubshait and their three little angels Yasmin, Fouad and Haya. Your never ending and unconditional love keeps me going. To my lovely parents in-law, Mohamed M. Attar and Jawaher H. Nazer I hope I am successful enough to make your daughter happy. To my new families the Attar's and the Nazer's thank you for being so loving. To the love of my life, my soul mate, my beautiful wife Zein Attar, you have given me amazing love, care and support throughout this journey. Thank you for being patient with me through thick and thin and I count my blessings everyday for having you in my life. Love you Zouny!

Acknowledgement

I would like to thank Patrick C. Hale, Director of MIT's System Design and Management Program for believing in me and giving me all the support needed for a successful SDM experience, I will never forget your guidance, generosity and compassion. I would like to thank my thesis advisor Professor Valentin Livada. Thank you for giving me excellent support, guidance, feedback and ideas throughout the development of this research work. You helped me gain tremendous knowledge in the area. I would like to thank the SDM staff for all their help and dedication in making my experience at MIT a rewarding one. I would like to thank my colleagues who have given me an opportunity to grow and learn more about myself. I will never forget our interactions and will always be there for you. Finally, I would like to thank my sponsoring company, Saudi Aramco, for giving me this amazing once in a lifetime opportunity and all the support needed to succeed.

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ABSTRACT

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Entrepreneurship is a distinctively individual concept. The individual entrepreneur works on his or her own to create a new business. Employees on the other hand function within the boundaries of the company. Employees that behave entrepreneurially collectively create the phenomenon of corporate entrepreneurship. In this thesis, we study the most common and overarching traits, characteristics and attributes of individual entrepreneurs. We analyze the most commonly prevalent traits and analyze how companies can be structured to foster strong sustainable corporate entrepreneurial ecosystems. The research also evaluates different corporate entrepreneurial models, types and frameworks through analyzing existing processes for creating corporate entrepreneurship and new business development. We explore concepts such as corporate venturing, corporate new business development, intrapreneurship, joint venturing, alliances, entrepreneurial human resource management, entrepreneurial organizational designs and business model innovation strategies. Specific companies that exemplified specific corporate entrepreneurship processes were analyzed such as DuPont 3M, IBM and Degussa AG. The concept of corporate entrepreneurship is instrumental in creating growth for companies but also could be a source of risk, where the example of Samsung Motors describes some of the negative impacts of corporate diversification. The research considers sustainable approaches for successfully implementing corporate entrepreneurship and new business develop and focus is given on the human interactions between the employee and the company.

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Chapter 1: Introduction

Research Motivation

Entrepreneurship is a word that is synonymous with individuality. The entrepreneur in the conventional business context is one person, usually independent and with limited resources, venturing on his or her own to start a new business. However, throughout history, the context of entrepreneurship has evolved. It now encompasses a wider spectrum of interchanging concepts that outline the dynamic nature of the phenomenon, now there are branches of entrepreneurship that interplay with business, society, politics and the environment.

Companies have strived to mimic the successes of entrepreneurs internally within their boundaries. The concept of internal entrepreneurial activity within the corporate environment evolved into the idea of "Corporate Entrepreneurship". It is an idea that progressed through the years to incorporate various types of activities such as corporate venturing, business model innovation and intrapreneurship to name a few. Figure 1 highlights corporate entrepreneurship types displaying how the concept branched out to incorporate a versatile group of methods (Morris, Kuratko, & Covin, 2008). Relative to conventional entrepreneurship, this corporate type involves a more complex corporate system environment. A more holistic approach needs to be taken in analyzing entrepreneurship in the corporate setting.

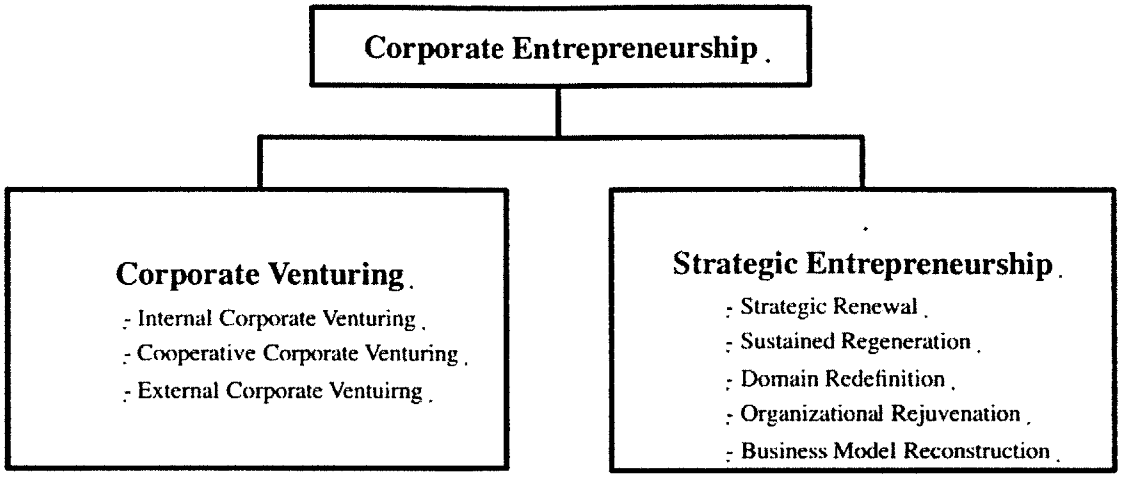

Figure 1: Defining corporate entrepreneurship. Adapted from Morris, Kuratko and Covin (2008)

The concepts of corporate entrepreneurship, corporate venturing and corporate new business development and corporate innovation have been researched and analyzed by several scholars throughout the years (Birkinshaw, 2005; Covin & Miles, 1999; Covin & Slevin, 1991; Gunther McGrath, Keil, & Tukiainen, 2006; Parboteeah, 2000; Stopford & Baden-Fuller, 1994; Thornberry, 2003; Tukiainen, 2004; Vanhaverbeke & Peeters, 2005; Wolcott & Lippitz, 2007; Zahra & Covin, 1995; Zahra, 1993). The research indicates similar definitional approaches for the concepts. It is evident that the research does not discriminate between the meanings of the concepts. In fact there is a high level of interconnectedness in the definitions of each. In this research document Corporate Entrepreneurship and Corporate New Business Development is used interchangeably, however, Corporate Venturing is a subset of these two concepts and Innovation is analyzed in terms of the Business Model.

By mapping the predominate themes from the research work, it is evident that what appears to be consistent is that the majority of the work addresses the multidimensional relationships between the employee and the company, therefore it is imperative to understand the personal side of corporate entrepreneurship was well as the organizational side and how each influences the behavior of the other.

A strong link exists between the individual entrepreneurial employees in the organization and the organization as a whole. Understanding how these two elements are linked and how they interact with each other is necessary for a better entrepreneurial environment to exist in the organization. The special relationship between them forms the foundation for the ecosystem. If a disconnection occurs within the ecosystem then there will be a lower probability for successfully implementing a corporate entrepreneurial culture.

The hypothesis is that in order for a company to remain competitive in an evolving business environment, it needs to be agile, dynamic and operationally fluid as shown in Figure 2. These interlinked elements are necessary for corporate new business development to sustainably occur in an organization. There is a need to support the entrepreneurial culture that is essential for fostering a corporate entrepreneurship ecosystem. Companies have the ability to implement corporate entrepreneurial activities in a sustainable and systematic manner and if successful, new value streams are created from this successful entrepreneurial process implementation.

Figure 2: Interrelationship between elements that support entrepreneurship at a corporate level

Two questions are explored in this thesis:

Research question 1: What are the core attributes, characteristics and traits that are essential to foster sustainable entrepreneurial behaviors within established organizations?

Research question 2: Can companies deliberately create entrepreneurship internally? Is it possible for a company to systematically create entrepreneurial activity within its boundaries?

Therefore, in order to answer these questions, this thesis research paper will evaluate entrepreneurial behaviors at the individual level. It will explore how organizations can successfully foster entrepreneurial environments to encourage individual employees to be entrepreneurial. Furthermore, the thesis research paper will present an evaluation of corporate entrepreneurship framework models. We will analyze companies that have successfully created sustainable corporate entrepreneurship environments and provide corroboration with previous research findings.

Thesis Organization

Chapter 2 outlines entrepreneurship at the individual level in relation to the larger organization. In this chapter, we analyze the different attributes, traits and characteristics that entrepreneurially driven employees have or should have in an organization. The chapter also addresses what methods companies can utilize to promote a sustainable entrepreneurial culture. It also outlines the importance of having a significant amount of flexibility to create an environment for employees to behave entrepreneurially.

Chapter 3 takes the research one level deeper through analyzing the context of the corporate environment. Exploring what characteristics the company as a whole needs to have in order to create a continuous flow of entrepreneurial activity. The chapter provides insights on different structural elements that help internal corporate entrepreneurship to flourish in an organization.

Chapter 4 explores the concepts of corporate entrepreneurship, corporate venturing and new business development approaches. It outlines the unique characteristics of each concept and describes how a company can create an ecosystem that promotes consistent new business generation.

Chapter 5 examines the employee within the context of the company as a whole through the analysis of the concept of intrapreneurship. It explains how important innovation is to foster a consistent corporate entrepreneurship culture and outlines examples of how companies can focus on new business model innovation to promote internal corporate entrepreneurship initiatives.

Chapter 6 analyzes corporate entrepreneurship framework models. It attempts to identify the unique aspects of the models and explore what companies can do to maintain a continuous flow of entrepreneurial activities to ensure an increase in corporate growth opportunities.

Chapter 7 attempts to analyze specific cases of new business development approaches undertaken by companies. The companies explored are DuPont, 3M, IBM and Degussa AG. The research attempts to outline the subtle similarities within each company's business development processes and identify the uniqueness of each.

Chapter 8 outlines an example of the negative side effects and risks of corporate entrepreneurship. The chapter highlights the example of Samsung Motors as a failed initiative by Samsung Group trying to enter into the automotive industry. The chapter's goal is to show a more encompassing outlook to show that corporate entrepreneurship does not always translate into successful business growth.

Chapter 9 summarizes the research findings and attempts to connect these findings with future areas of research to expand the research work.

Chapter 2: Entrepreneurial Culture at the Employee Level

When a company has the ability to successfully promote an entrepreneurial culture across its organizational units, it is better positioned to experience value added growth. However, in order to be successful in creating the entrepreneurial culture stated, the existing corporate cultural standards need to be transformed.

For a company to transform and become entrepreneurial, it needs to create a culture that supports risk taking. It needs to have a culture that inspires entrepreneurial spirit instead of having a culture that forces it away (Kenney & Mujtaba, 2007). In his analysis of innovation and entrepreneurship, Johnson (2001) describes employees that behave entrepreneurially as "*Mavericks*". Mavericks in Johnson's (2001) view are nonconformists, rebellious and self-driven individuals who have a tendency to go against the flow. They typically break down the organization's conventional mode of operation to pursue their entrepreneurial endeavors. These types of employees do not prevail in extremely structured and bureaucratic organizations. Therefore, by understanding this existing impediment for the entrepreneurial culture to thrive, it is important for companies that want to be entrepreneurial to support the culture that will allow these employees to succeed.

Johnson (2001) explains that in the conventional corporate management setting, the traditional view towards corporate entrepreneurship is a conservative one. Management's tolerance of the behaviors of its entrepreneurially driven employees shown in Figure 3 is very conservative (Johnson, 2001). In conventional corporate management systems, employees that exhibit these types of attributes are difficult to manage. Therefore, if this management view persists, there is potential for it to evolve into management fear, which is a strong barrier to creating the supportive entrepreneurial culture needed. However, it is important to distinguish the type of fear being outlined in this case. It is not the typical fear that people experience, where one person is afraid of the other due to a certain threat for example. In this context, it is the fear of the unknown. It occurs when someone does not know or understand the outcomes of specific actions of the other person. Where in the case of the company, the actions are those of its entrepreneurially driven employees.

Therefore, when companies decide to use corporate entrepreneurship as a strategic tool for business growth, the training and education of corporate management is necessary in order to develop the capacity for risk tolerance and alleviate the associated fear of the unknown. Educating management helps establish a clear understanding of the expected behaviors that may arise from adopting an entrepreneurial culture new to the organization (Ireland, Kuratko, & Morris, 2006).

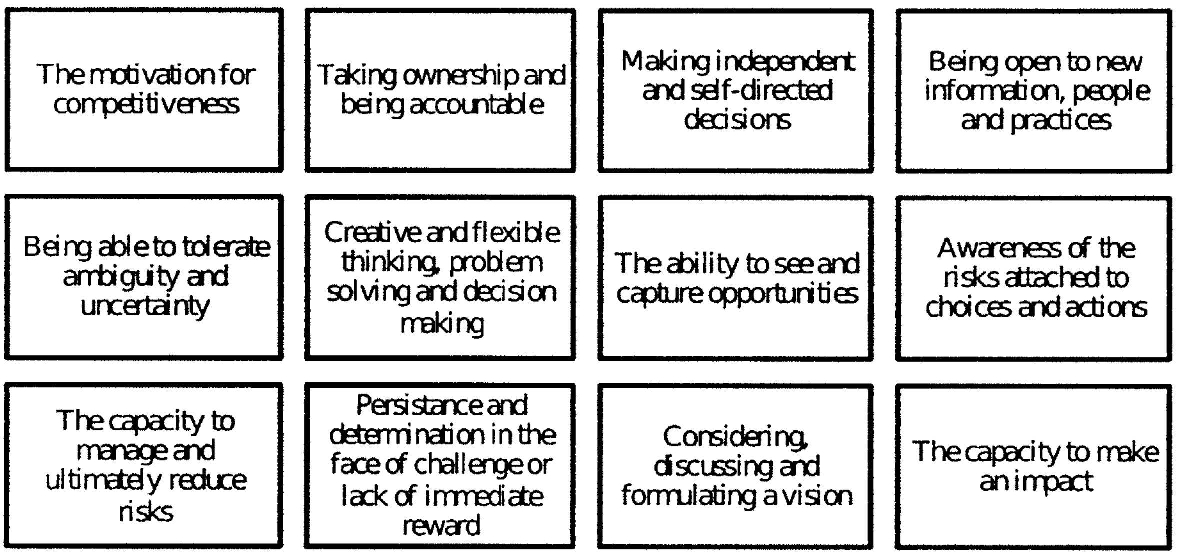

Figure 3: A summary of entrepreneurial attitudes and behaviors adapted and developed from Johnson (2001)

Capacity for Tolerance of Entrepreneurial Behavior

Due to having relatively rigid corporate structures merged with a bureaucratic mindset, managers are forced to pay special attention to entrepreneurially behaving employees (Johnson, 2001). However, in most cases, the attention that is given by the managers focuses on impeding the needed support rather than being a source of promoting it, even if these new ventures have promising potential for the company (Johnson, 2001). The reason for creating this hurdle is based on the unnecessary fear of a disproportionate entrepreneurial culture, which will likely be difficult to manage (Johnson, 2001). Sholl

(1998) provides an additional perspective, where he emphasizes that internal corporate entrepreneurship is in fact a vehicle for operational flexibility for the company (Sholl, 1998). It allows the company to have a flexible and more innovative environment, where the company can support its existing businesses through a process of selective innovation. Choosing the appropriate type of innovative approach to help support the new business venture (Sholl, 1998).

The Important Balance Between Flexibility and Rigidity

It is challenging for companies to strike the balance between structure and flexibility. However, it is imperative that companies no matter how large, have the necessary flexibility to adapt (Tichy & Charan, 1989). The difficulty is that too much flexibility or too much rigidity in any direction creates an imbalance and produces a negative environment that does not support entrepreneurial activity. Companies need to allow their entrepreneurially motivated employees and managers a certain level of freedom in order to help them internally undertake new business ventures. Moreover, companies need to be able to tolerate calculated risk taking that is a typical byproduct of entering into a new business venture. If companies are able to manage the risks associated with entering into new and unknown businesses then they are more likely to realize the benefits from entrepreneurially focused employees.

Creating Entrepreneurial Pockets in an Organization

Johnson (2001) points to an important issue that is critical for entrepreneurial companies. Where in a standard corporate setting, it may not be feasible or even advisable to have the entire workforce comprised of corporate entrepreneurs. It may prove to be very difficult and expensive for a company to manage (Johnson, 2001). However, it is feasible to achieve a smaller and more controlled level of entrepreneurial activity at the corporate level.

The company can promote this by helping to create entrepreneurial pockets across the different business units within the organization. These small pockets are comprised of employees that possess the dominant entrepreneurial behaviors and attributes previously highlighted. The expectation is that these pockets of entrepreneurial employees will influence the larger general employee population that may not exhibit strong entrepreneurial attributes and hence upgrade the status quo. If successful, the company will be able to create several entrepreneurial pockets, and therefore create a higher probability for creating new business opportunities (Johnson, 2001).

Entrepreneurial Attribute Continuum

As shown in Figure 4, Johnson (2001) describes an entrepreneurial spectrum that outlines the link that exists between the entrepreneur as an "individual" in the context of the company as a "whole" (Johnson, 2001). The entrepreneur needs to have specific traits and characteristics to be able to practice entrepreneurship in the company. He further outlines the associated individual characteristics and behaviors that the entrepreneur needs to have in order to develop the necessary entrepreneurship skills that would benefit the firm (Johnson, 2001).

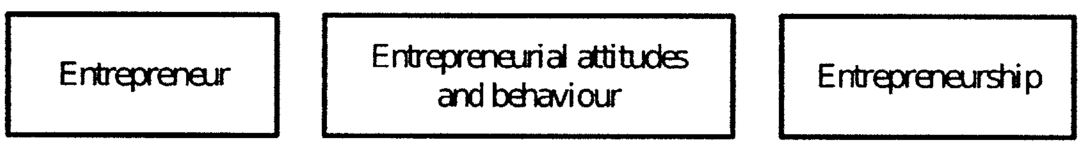

Figure 4: Three aspects of entrepreneurship, adapted from Johnson (2001)

It is important for a company to be able to capture and segment off the entrepreneurial behaviors within each business unit in the company (Johnson, 2001), in doing so the company ensures that its employees develop personal ownership and commitment for the entrepreneurial projects. This will increase the likelihood of success of the new business venture from its early beginnings until it reaches the required maturity level. Sustaining this sense of commitment allows management the ability to better hand over projects to the next generation of company entrepreneurs who will likely exhibit the same sense of ownership (Johnson, 2001). However, It is important not to limit the available organizational resources in the company. In order for corporate entrepreneurial projects to succeed, support from the highest levels of the organization is essential.

Johnson (2001) cautions from comparing entrepreneurial employee competencies with regular employee competencies falling under the standard human resource management model. In fact, it is important to maintain a flexible and open view point when supporting these behaviors from a human resources standpoint (Johnson, 2001). By allowing a flexible approach, the company ensures that the necessary behaviors become widespread across the entire company. Employees must not feel threatened from corporate human resource policies impacting their career advancement. If employees feel that exhibiting entrepreneurial traits within the organization will limit their career progression then the likely outcome will be that the company will experience less entrepreneurial activity.

Each individual employee will have a subset of entrepreneurial behaviors already instilled in him or her personality profile (Johnson, 2001). To enable these behaviors to appear depends on the situation and the business environment that the employee is facing within the organization (Johnson, 2001). Depending on the type of new venture being explored, Johnson (2001) indicates that employees will display entrepreneurial behaviors accordingly, and hence, react to create value for the company (Johnson, 2001). This confirms other research hypothesis about inherent entrepreneurial ability. For example in his analysis of "*adaptation-innovation*", Kirton (2003) puts the emphasis on the person's cognitive ability to be able to manage uncertain environments. Uncertain environments are typical with new business ventures. Therefore, the associated challenge of uncertainty in entrepreneurial projects is mitigated with the intrinsic abilities to adapt to these uncertain and challenging environments (Kirton, 2003).

Gibb (1990) gives an interesting outline of entrepreneurial employee characteristics in a company. He lists a series of "*Enterprising Attributes*" shown in Figure 5, that describe what an individual employee needs to have in order to become more entrepreneurial (Gibb, 1990). The reason why there is an emphasis on the word "need" in this analysis is to stress that the attributes depend on the situation that arises. When there is a need for the employee to react to a change in the business environment, there is a higher likelihood that new entrepreneurial attributes emerge in response to this challenging environment (Gibb, 1990). The individual or the company may develop all, some or a combination of these attributes that could help with the acclimation process in order to survive and grow (Gibb, 1990). The essence of the analysis is the ability to adapt to the changes as needed. Adaptation is a fundamental attribute that entrepreneurs need to have to succeed. It is important to identify the protagonists in focus here, in Gibb's (1990) view, both the employee and the manager have the potential to be entrepreneurial (Gibb, 1990). His findings present an opportunity to understand how individuals and companies can both simultaneously acquire entrepreneurial behaviors. The hypothesis is that at the individual level, employees form the basis for new business generation in a company; and therefore, having entrepreneurial attributes at the employee level will eventually translate into having similar entrepreneurial attributes at the corporate level.

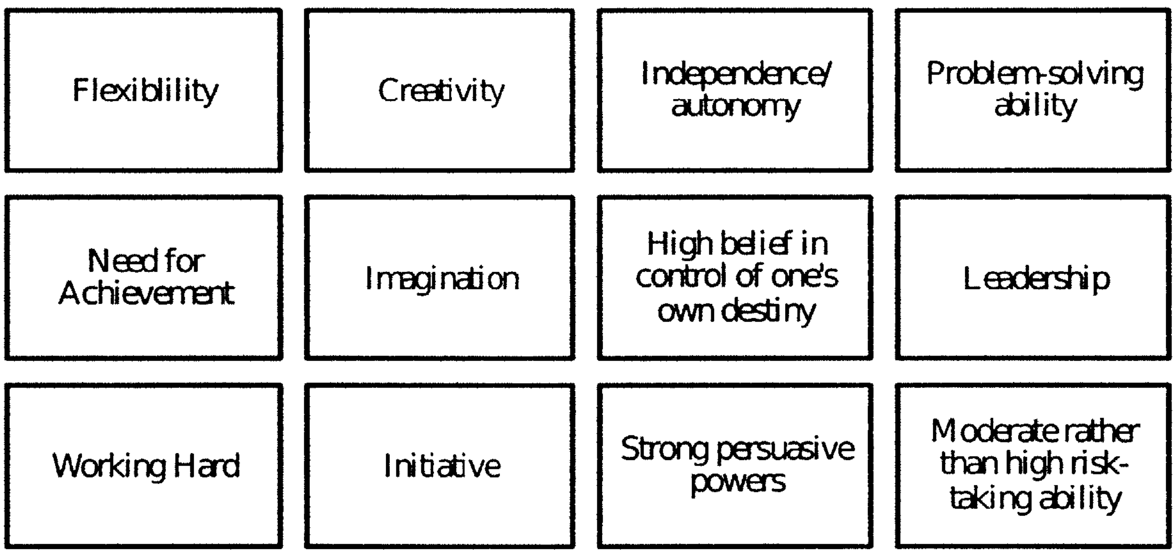

Figure 5: Enterprising Attributes, adapted from Gibb (1990)

Both Gibb (1990) and Johnson (2001) identify twelve entrepreneurial attributes. By analyzing both sets of attributes, a clear likeness appears between both. For example, both address the issue of risk management and both stress the need for allowing autonomy to entrepreneurially driven employees. Both confirm the importance of having creative problem solving skills to enable quick decision making to determine whether to continue pursuing the new venture or stop working on it.

Entrepreneurial attributes are a necessity to foster a corporate entrepreneurial environment. Having individual corporate entrepreneurial attributes such as risk taking, nonconformity, self-motivation and high energy levels are the over arching traits that contribute to the transformation of the organization's culture into a corporate entrepreneurial culture (Kuratko, Hornsby, & Goldsby, 2004).

In continuation of the analysis of attributes and characteristics, another list is described by Timmons and Spinelli (2009). Shown in Table 1 is a historical overview of the most prevalent entrepreneurial characteristics shown in early research works (Timmons & Spinelli, 2009). It is clear that their findings are consistent with both Gibb (1990) and Johnson (2001). This confirmation of attributes and characteristics outlines the importance of understanding what is the inspiration for them to appear in individual employees and what can companies in response to promote creating an environment that supports entrepreneurship to occur.

Date	Authors	Characteristics
1848	Mill	Risk bearing
1917	Weber	Source of formal authority
1934	Schumpeter	Innovation; initiative
1954	Sutton	Desire for responsibility
1959	Hartman	Source of formal authority
1961	McClelland	Risk taking; need for achievement
1963	Davids	Ambition; desire for independence, responsibility, self-confidence
1964	Pickle	Drive/mental; human relations; communication ability; technical knowledge
1971	Palmer	Risk measurement
1971	Horanaday and Aboud	Need for achievement; autonomy; aggression; power; recognition; innovative/independent
1973	Winter	Need for power
1974	Borland	Internal locus of power
1982	Casson	Risk; innovation; power; authority
1985	Gartner	Change and ambiguity
1987	Begley and Boyd	Risk taking; tolerance of ambiguity
1988	Caird	Drive
1998	Roper	Power and authority
2000	Thomas and Mueller	Risk; power; internal locus of control; innovation
2001	Lee and Tsang	Internal locus of control

Table 1: Characteristics of entrepreneurs highlighted by researcher's historical work from 1848 to 2001. Adapted from Timmons and Spinelli (2009)

Although the majority of attributes involve individual personality traits, there is another set of more specific attributes that must accompany them. The corporate entrepreneur needs to have in addition to the entrepreneurial attributes and characteristics, the relevant business attributes that involve having strong business acumen and managerial competencies to go with it. Possessing the combination of both of these elements as shown in Figure 6 allows the corporate entrepreneur to successfully advance the new business venture forward (Timmons & Spinelli, 2009).

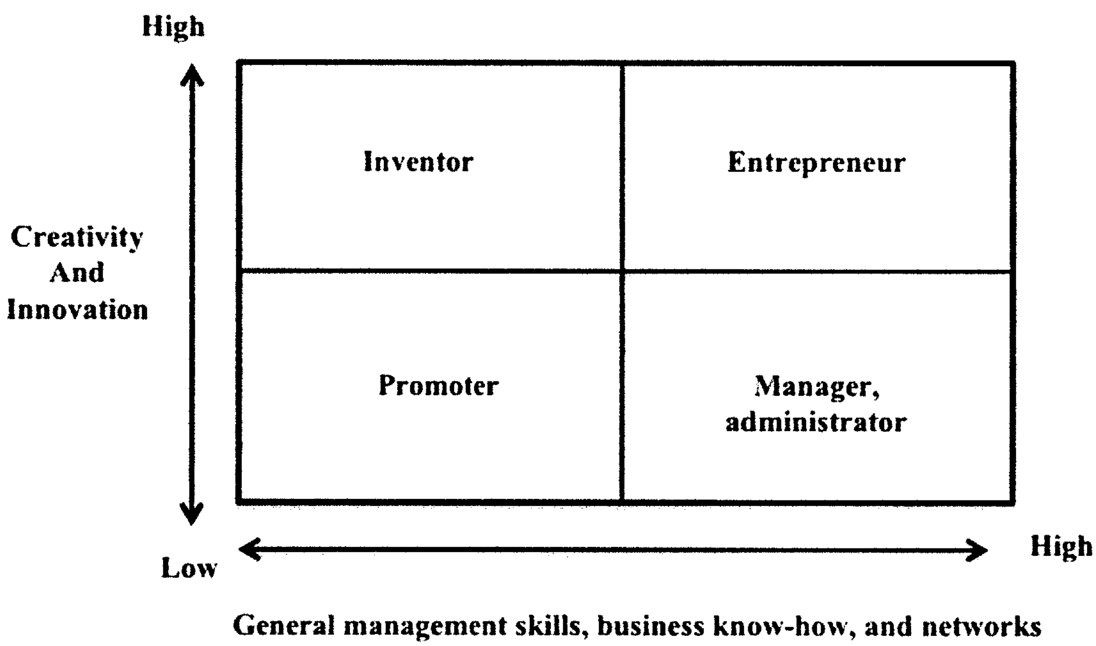

Figure 6: Corporate entrepreneurs need to have both entrepreneurial skills and attributes along with business acumen and management skills. Adapted from Timmons and Spinelli (2009)

Entrepreneurial Attributes that Promote New Business Creation

Timmons and Spinelli (2009) attempt to describe and consolidate many years of research work that determines the overlapping and overarching attributes that consistently appear in literature focusing on individual entrepreneurship and corporate entrepreneurship (Timmons & Spinelli, 2009). They combine several themes with relevant entrepreneurial attitudes and behaviors of entrepreneurs and non-entrepreneurs as summarized in Table 2 and shown in Figure 7. The desirability of certain attributes is due to the added value they generate, and the undesirability of certain attributes is also due to the non value addition they create, therefore, company managers need to be aware of both sides and actively promote the attributes that add value to the organization (Timmons & Spinelli, 2009).

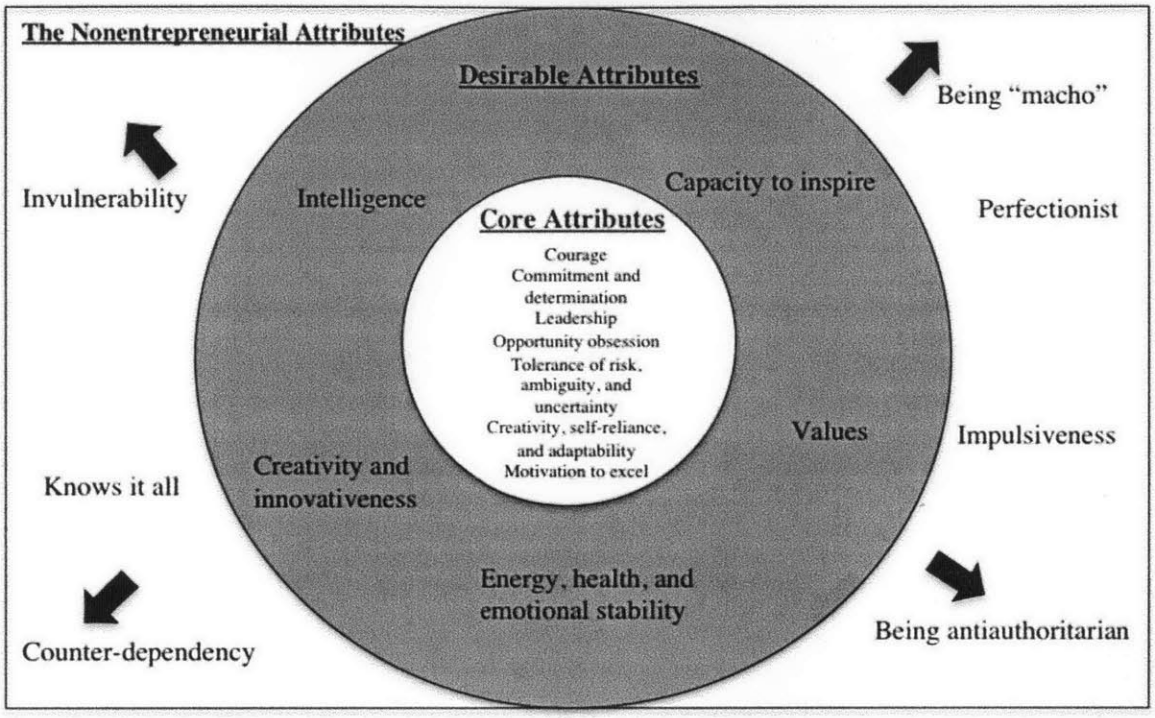

Figure 7: Core and desirable entrepreneurial attributes adapted from Timmons and Spinelli (2009)

Timmons and Spinelli (2009) describe the importance of "Commitment and Determination" for entrepreneurially motivated employees. These employees must be committed to the projects that they are starting and also must have a high level of determination to see it through to its final stages (Timmons & Spinelli, 2009). Entrepreneurs need to be able to move their projects forward no matter what challenge faces them internally or externally. The organizational issues that impeded corporate entrepreneurial activity will become a barrier for corporate entrepreneurs. Without having a strong commitment to the cause and determination, breaking the barrier will be difficult for employees to achieve.

Another important theme that Timmons and Spinelli (2009) highlight in their work is the importance of having "Courage" (Timmons & Spinelli, 2009). Employees in large firms need to have the courage to challenge the status quo. He or she needs to be able to face challenges head on and be brave in the face of possible failures that could occur due to the uncertain nature of the startup (Timmons & Spinelli, 2009). Because the activity is occurring in a corporate environment, there is also another dimension to deal with, which is the fear of reprimand by management if the new venture is unsuccessful. This is why being courageous is critical to drive entrepreneurial projects forward.

The majority of entrepreneurs are inherently self-starters, therefore, they should have great "Leadership" ability (Timmons & Spinelli, 2009). Being pro-active and having the ability to lead multidisciplinary teams that are typically comprised of technical and non-technical individuals is important (Timmons & Spinelli, 2009). Since corporate entrepreneurs operate in a corporate setting, they usually have developed the ability to follow. Therefore corporate entrepreneurs have an advantage over non-corporate entrepreneurs because they are accustomed to following corporate directives.

The authors highlight the relatively intrinsic and personal attribute of "Opportunity Obsession", which is also aligned with having commitment and determination behaviors (Timmons & Spinelli, 2009). The principle here is having the ability to drive a new venture in an obsessive manner. Corporate entrepreneurs need to be both aggressive and visionary in approaching new projects. The corporate entrepreneurs need to "obsess" over every detail to increase the opportunity of success for the venture. This creates the necessary drive to successfully launch the new venture.

More than likely, entrepreneurs in a company or in an individual setting have a strong capacity for "Tolerance of Risk, Ambiguity, and Uncertainty" (Timmons & Spinelli, 2009). As previously discussed, venturing into the unknown requires courage, determination and the ability to mitigate the risks that come along with launching a new venture (Timmons & Spinelli, 2009). Skillfully managing uncertainty allows the entrepreneur to progress the new project forward and be able to adapt to challenging situations. Risk mitigation is a fundamental attribute that came across in several research studies. It is crucial to have the ability to manage risk at all levels in the organization. Without the capacity to manage risks, the level of entrepreneurial activity will decrease significantly.

Furthermore, due to the natural ambiguity that comes with new entrepreneurial projects, entrepreneurs need to possess traits of "Creativity, Self-Reliance, and Adaptability" to be able to maneuver through the persisting ambiguous challenges that come with new ventures (Timmons & Spinelli, 2009). If faced with a challenge, the entrepreneurs need to be able to speedily adapt and also maintain resilience in the face of challenges. They also need to be able to creatively overcome any obstacles that may arise through launching a new venture.

To push an entrepreneurial project forward, Timmons and Spinelli (2009) emphasize that entrepreneurs need to have a strong "Motivation to Excel" (Timmons & Spinelli, 2009). This is a very personal characteristic that is found in many entrepreneurially driven individuals, managers need to motivate these employees to ensure the ecosystem supports creating entrepreneurial projects. Entrepreneurs need to have strong competency self-awareness. They need to be able to drive initiatives with the short-term and long-term goals in mind with the goal to excel in driving the initiatives (Timmons & Spinelli, 2009).

Theme	Attitude or Behavior
Commitment and determination	Tenacious and decisive, able to recommit/commit quickly
	Intensity competitive in achieving goals
	Persistent in solving problems, disciplined
	Willing to undertake personal sacrifice
	Immersed in the mission
Courage	Moral strength
	Fearless experimentation
	Not afraid of conflicts, failure
	Intense curiosity in the face of risk
Leadership	Self-starter; high standards but not perfectionist
	Team builder and hero maker; inspires others
	Treats others as you want to be treated
	Shares the wealth with all the people who helped create it
	Honest and reliable; builds trust; practices fairness
	Not a lone wolf
	Superior learner and teacher; courage
	Patient and urgent
Opportunity obsession	Leadership in shaping the opportunity
	Has intimate knowledge of customers' needs and wants
	Market Driven
	Obsessed with value creation and enhancement
Tolerance of risk, ambiguity, and uncertainty	Calculated risk taker
	Risk minimizer
	Risk sharer
	Manages paradoxes and contradictions
	Tolerates uncertainty and lack of structure
	Tolerates stress and conflict
	Able to resolve problems and integrate solutions
Creativity, self reliance, adaptability	Non conventional, open-minded, lateral thinker (helicopter mind)
	Restless with status quo
	Able to adapt and change; creative problem solver
	Quick learner
	No fear of failure
	Able to conceptualize and "sweat details"
Motivation to excel	Goal and results oriented; high but realistic goals
	Drive to achieve and grow
	Low need for status and power
	Interpersonally supporting (versus competitive)
	Aware of weaknesses and strengths
	Has perspective and sense of humor

Table 2: Summary of the themes and the associated entrepreneurial attitudes and behaviors. Adapted from Timmons and Spinelli (2009)

Chapter 3: A Definitional Analysis of Corporate Entrepreneurial Characteristics

Ireland, Kuratko and Morris (2006) provide an encompassing definition of corporate entrepreneurship as "a process through which individuals in an established firm pursue entrepreneurial opportunities to innovate without regard to the level and nature of currently available resources. Entrepreneurial opportunities are situations in which new products (goods or services) can be sold at a price exceeding their cost of development, distribution and support" (Ireland et al., 2006). The authors highlight an important correlation between individual employees and the company as a whole, which is the foundation for creating entrepreneurial activities at the corporate level. It is important to understand the link that exists between the employee and the company he or she is in and be aware of the dynamic relationship of each. Both are key stakeholders with interconnecting interests. The employee wants to grow and develop within the company and the company wants to maximize outputs from its employees.

In order for entrepreneurship to occur at the corporate level, the company needs to take a holistic approach in reviewing interlinks between individual entrepreneurial activities in the company and the company's overall strategic vision. As defined by Wolcott and Lippitz (2007), corporate entrepreneurship is "the process by which teams within an established company conceive, foster, launch and manage a new business that is distinct from the parent company but leverages the parent's assets, market position, capabilities or other resources" (Wolcott & Lippitz, 2007). The distinction in this case is that the team becomes its own separate entity within the larger organizational system. It is still connected to the larger organization and its survival and success relies on its access to the resources of the larger organization. The link between the individual employees and the company is strongly exemplified in this definition.

Traditionally, as suggested by Ireland, Kuratko and Morris (2006) companies can use corporate entrepreneurship as a means for success. It is a way for the company to compete and gain higher returns on its bottom line (Ireland et al., 2006). They suggest that the most ideal environment to utilize corporate entrepreneurship is when there is a significant level of uncertainty along with a proposed market challenge that faces the company (Ireland et al., 2006). Because of the dynamic and flexible nature of corporate entrepreneurship, if utilized properly, it is likely that the company can overcome most market challenges facing it. Corporate entrepreneurship is not the only solution for all challenges that face a company. It provides, a set of tools and process options that a company can implement to overcome the challenging environment.

Corporate Characteristics that Foster Increased Entrepreneurial Activity

A company needs to have certain characteristics in order to create a healthy ecosystem for corporate entrepreneurial activities thrive. For this to occur, the company needs to be both flexible and dynamic. Flexibility and dynamism came across as fundamentally important characteristics because they address the issue of adapting to change as a result of a challenge. As mentioned previously entrepreneurial activities come with a high level of uncertainty and create change factors for the company. Some companies are unable to tolerate this change because they lack flexibility and dynamism. Therefore, it is a key characteristic that a company needs to develop to be able to create a supportive entrepreneurial ecosystem that promotes entrepreneurial activities across the different business units in the organization.

The challenge for the company is in the "corporate" part of corporate entrepreneurship. The approach in any corporate environment suffers from imbedded organizational systems that are designed to control daily work functions. These types of organizational systems hinder the creation of the supportive environment necessary for corporate entrepreneurial activities to succeed (Ireland et al., 2006). The company needs to be willing to change the way it behaves. The corporate culture needs to be oriented to newness. If the company's goal is to improve and grow, then it needs to have characteristics that support utilizing new business development approaches to develop new products, markets, operations and services to achieve growth (Ireland et al., 2006).

Spreading the Entrepreneurial Culture Across All Organizational Levels

Thornberry (2003) defines corporate entrepreneurship as "an attempt to take both the mindset and skill set demonstrated by successful start-up entrepreneurs and inculcate these characteristics into the cultures and activities of a large company" (Thornberry, 2003). What Thornberry (2003) is attempting to highlight is that for a company to become entrepreneurially driven, it needs to be able to systematically inject entrepreneurial traits that are evident in the individual entrepreneur into other organizational business streams in the company. By doing so, the company will be able to mirror these traits on wider scale and spread the entrepreneurial culture across the organization.

Thornberry's (2003) view of corporate entrepreneurship is analogous to giving an antidote to cure a person. He creates the sense that a non-entrepreneurial firm is less healthy than an entrepreneurial one and by injecting entrepreneurial traits the firm's overall "business" health improves. His view differs from Ireland, Kuratko and Morris (2006) in that it simplifies the concept of creating an entrepreneurship culture in the company through instilling the necessary entrepreneurial characteristics. The belief is that if consistent across the organization as a whole, injecting entrepreneurial characteristics will likely create entrepreneurial pockets and eventually grow the culture internally within the organization.

On the other hand McFadzean, O'Loughlin and Shaw (2005) describe corporate entrepreneurship "as the effort of promoting innovation in an uncertain environment. Innovation is a process that provides added value and novelty to the organization, its suppliers and customers through the development of new procedures, solutions, products and services as well as new methods of commercialisation. Within this process the principal roles of the corporate entrepreneur are to challenge bureaucracy, to assess new opportunities, to align and exploit resources and to move the innovation process forward. The corporate entrepreneur's management of the innovation process will lead to greater benefits for the organization" (McFadzean, O'Loughlin, & Shaw, 2005). In this view of corporate entrepreneurship, the authors highlight the importance of innovation and newness in fostering an entrepreneurial environment. Innovation is probably one of the most essential components of entrepreneurship. Many examples of how innovation continues to revolutionize the corporate world are evident in history and present day examples. As described by McFadzean, O'Loughlin and Shaw (2005) in Figure 7 innovating in a business operational sense will yield corporate entrepreneurial successes.

When comparing the definitional understanding of corporate entrepreneurship held by Thornberry (2003) and McFadzean, O'Loughlin, and Shaw (2005) a distinct observation of existing commonalities between both viewpoints appear. It validates the importance for a company to have common attributes that link the person with the entrepreneurial traits and the company that is striving to acquire these entrepreneurial traits. The understanding of how corporate entrepreneurship can be implemented on a wider scale across larger organizations becomes clearer once the sought after characteristics are identified. It also allows larger organizations to sustainably launch corporate entrepreneurial initiatives.

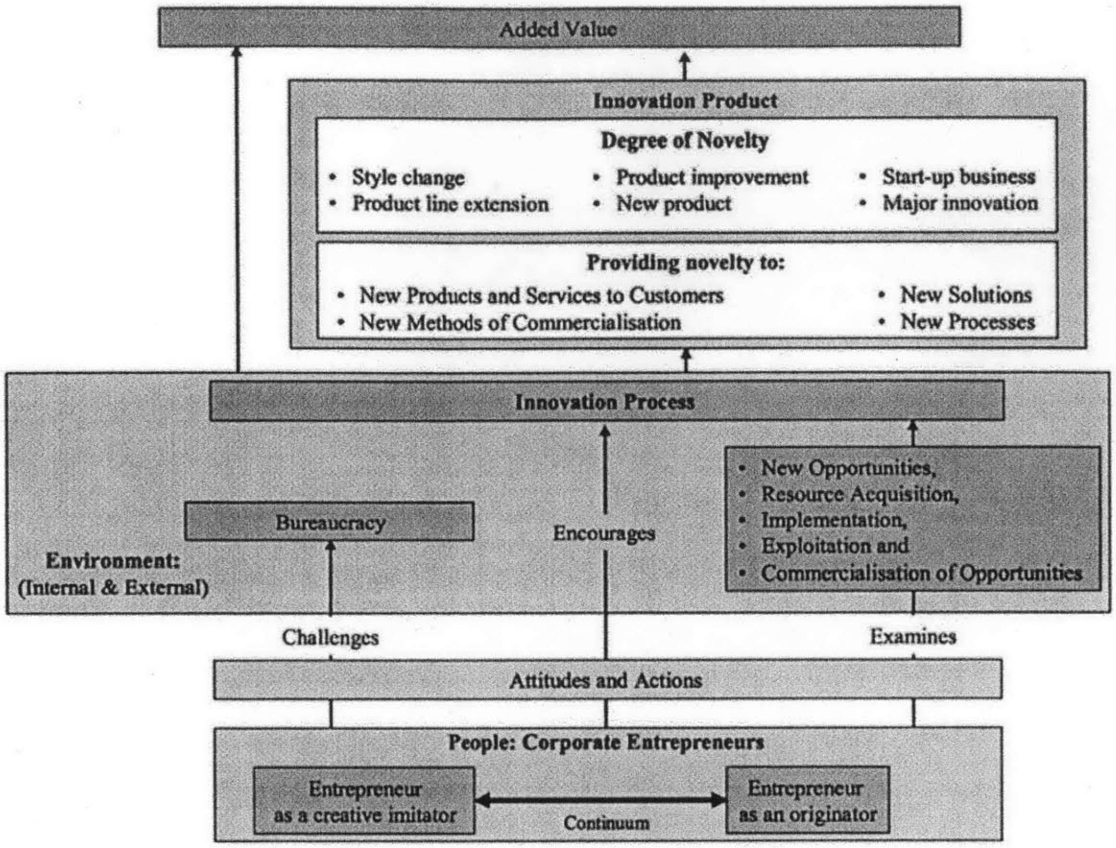

Figure 7: A holistic view of corporate entrepreneurship and innovation adapted from McFadzean, O'Loughlin, and Shaw (2005)

Structure to Promote Continuous Corporate Entrepreneurship in an Organization

In their breakdown of the necessary elements for successful and sustainable corporate entrepreneurship, Ireland, Kuratko and Morris (2006) identify four critical elements that are significant for a company to manage when it attempts to create an entrepreneurial ecosystem. These are: "Structure", "Controls", "Culture" and "Human resource management systems" (Ireland et al., 2006). These elements form the basis of the necessary ecosystem to support entrepreneurial activities. Figure 8 outlines the four key elements and describes the focus of each element and how together they can create an internal environment that supports entrepreneurship.

Lean Structure Orientation

Bureaucracy in a company limits and in some cases halts corporate entrepreneurial initiatives. Structured environments suppress the ability of employees to develop and move their initiatives forward. A company needs to have a supportive organizational structure that eliminates or lessens the negative impact associated with corporate bureaucracy. To minimize the impact of bureaucracy, the organization needs to have less approval lines and provide more autonomy for its lower level employees. By doing so, the company will allow employees to pursue entrepreneurial initiatives and create a more innovative environment. It will also help management be more innovative in the way they manage front line employees (Ireland et al., 2006). Employees at the working level are the main source of entrepreneurial activity. They however, need the required support from management to ensure sustainable initiatives.

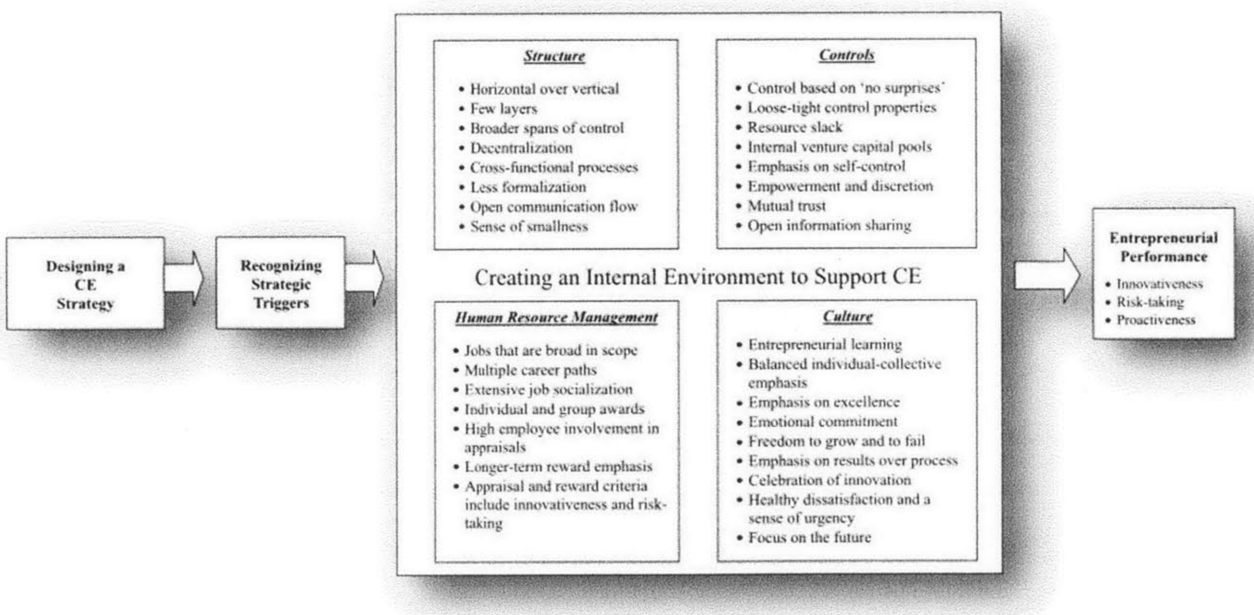

Figure 8: Framework for sustainable corporate entrepreneurship. Adapted from Ireland, Kuratko and Morris (2006)

Manage Controls

If a company enforces too many controls to manage employee activity, it will lessen the likelihood of creating a successful corporate entrepreneurship environment (Ireland et al., 2006). Too many controls contradict the important corporate attribute of openness highlighted by Johnson (2001) and flexibility highlighted by Gibb (1990), which are fundamental traits that need to exist in order to support the creation of the entrepreneurial ecosystem in a company (Gibb, 1990; Johnson, 2001).

Companies need to have the ability to balance the level of control along with allowing certain levels of flexibility. A company needs to be more accepting of entrepreneurial activities initiated by its employees (Ireland et al., 2006). It should avail necessary resources that help the employees pursue new business initiatives. However, it is important that a company does not completely eliminate controls from its organizational systems, as this may prove to be too risky of a strategy. Since in a corporate environment some control is necessary to maintain company operability in a profitable mode. Nevertheless, a company should be flexible enough to be able to increase or decrease its level of controls based on the entrepreneurial measure of the project at hand and its potential for success or failure.

Approach of an Entrepreneurially Empowered Culture

Ireland, Kuratko and Morris (2006) outline the importance of having a culture that accepts continuous risk taking and change (Ireland et al., 2006). The culture aspect of the company is important as it allows it to identify and support corporate entrepreneurs. The culture also gives new business initiatives wide acceptance across all levels of the organization from its employees to its management team (Ireland et al., 2006). However, this could also be a risky approach, since giving autonomous acceptance to what Johnson refers to as *"mavericks" and "high risk"* individuals (Johnson, 2001) may negatively impact the overall corporate environment. The culture should be accepting of employees that are risk takers. Promoting risk management minimizes miscalculating project launches and therefore creates a better business environment.

Dynamic Human Resource Management Approach

Companies that have entrepreneurially motivated human resource practices have a better opportunity to support corporate entrepreneurship activities (Ireland et al., 2006). These practices need to cover the full human resource management spectrum which includes recruiting, training and rewarding employees (Ireland et al., 2006). The authors highlight the goals of the company's human resource management system where the system should be able to help employees do the following (Ireland et al., 2006):

1. "Embrace creative and innovative behavior", where in this case there is an emphasis on creativity and awareness that corroborates their importance. Without the ability to innovate and think creatively, less entrepreneurial initiatives will be created. Innovation remains a critical component of successful corporate entrepreneurship.
2. "Take reasonable levels of risk", the importance of managing risks at the individual level is important. The policies at the corporate level need to promote calculated risk taking. To support entrepreneurial activities in the company, corporate management should not penalize failures. In fact the human resource policies should support both the successes and the failures. In doing so, a sustainable flow of activity will likely prevail and will result in knowledge acquisition.
3. "Use a long-term orientation to evaluate innovation-based possibilities", because of the ambiguous nature of new entrepreneurial ventures, it is important that the human resource policies are aligned with the company's long-term strategy. Since it is unclear in the early stages of starting up an entrepreneurial project whether or not it is going to be successful, the corporation's posture should focus on long-term results.
4. "Focus on results", should be the backbone policy for human resource management of innovative companies. Because individual corporate entrepreneurs work within the internal boundaries of the company some project cases go through a continual project loop. It is imperative to have a results oriented approach to avoid non added value loops and to increase successful new idea execution. This type of corporate control is acceptable as it is in accord with the attribute findings outlined by Timmons and Spinelli's (2009) of the importance of being result oriented (Timmons & Spinelli, 2009).

5. "Work cooperatively with others", since teamwork is important when a new venture is being created within the company, and because it is a critical attribute for successful entrepreneurship, it is important that companies have human resource policies that promote quick and efficient team formation and rewards projects that are team oriented. Individualism is important in the initial stages of developing the new venture, however, the success is ultimately due to the formation of a strong team. Therefore, the policies should reflect this and encourage cross-organizational interactions and allow individual employees to move across departments seamlessly to better support the entrepreneurial project.
6. "Tolerate ambiguity", is an essential issue that is important for companies to learn how to manage. Ambiguity and uncertainty are natural byproducts of entrepreneurial ventures. Therefore, the company's human resource management system needs to allow its employees the ability to manage and tolerate ambiguity. One way for this to occur would be to create a reward for risk approaches. The higher the risks the higher the reward and the lower the risk the lower the reward. Although the company needs to make sure that there is a balance in this situation as there is a likelihood of higher risk initiatives being pursued by the employees to increase financial returns.
7. "Assume responsibility for change", is another important ability that employees need to be able to have. The company needs to have a policy that allows a certain level of autonomy for its employees. Whether it is full or partial, the implications are for the benefit of the entrepreneurial activity. Therefore, creating a culture within the company that allows employees to have a sense of real ownership and responsibility for the success or failure of the project is very beneficial for growing the company's entrepreneurial culture.

When observing these seven human resource elements that support employees becoming more entrepreneurial, it is clear that the same traits reappear again similar to what was described by Johnson (2001) and Gibb (1990). The major components for creating corporate entrepreneurship within the company are applicable in this list. Creativity, innovativeness, managing ambiguity and result orientation are some of the elements that constantly reemerge in some form. It confirms that by having these attributes at the organizational level, consistent entrepreneurship activity will likely materialize.

Operational Fluidity Increases Entrepreneurial Activities

Operational fluidity is an important concept that entrepreneurially inclined companies need to embrace in order to be able to transform their organizational mindset and culture into a more entrepreneurial one. Examples of companies switching their operational mindset include what occurred during the internet boom when, Amazon.com for example forced large booksellers like Barnes & Noble to change the way they sold books to customers, forcing the company to shift its traditional brick and mortar store operation to expanding its presence online to be able to compete with the likes of Amazon.com (Thornberry, 2003). A similar occurrence is observed in the grocery shopping industry where Peapod.com, the online grocery shopping company was successful in changing the shopping experience for daily grocery shoppers (Thornberry, 2003). Companies shifting their operational mindset are able to adapt to threats from disruptive companies that are more technologically advanced. Due to this fluidity to change the corporate mindset, the potential for new business creation in the organization increases. The concept of corporate entrepreneurship becomes a deployable strategy that can be implemented within an organization's overall strategy in order to facilitate creating new and sustained business growth for the company.

The Influence of Management on Entrepreneurial Activities

According to Burgelman, companies that want to foster entrepreneurial behaviors need to have what he refers to as "*self-organizing systems*" (Burgelman, 1983). These systems aim to provide the necessary autonomy for middle level management to support entrepreneurial projects launced by front line employees in relation to the larger organization (Burgelman, 1983). He adds that firms need to have a corporate radar to identify entrepreneurial activities aligned with its strategies from within the firm or outside of it (Burgelman, 1983). It is important for a company's management team to be able to identify the entrepreneurial pockets within the organization. Management needs to be able to identify clusters of organizations that are entrepreneurial and also individual employees that exhibit strong attributes towards entrepreneurship and nurture them in order to faciliate successful new business creation.

In terms of finding new opporutnities, companies use coporate entrepreneurial activities as a *"safety valve" or "insurance"* to avoid deleterious projects and create opportunisitic enviornments to grow (Burgelman, 1983). Shown in Figure 9, Burgelman (1983) outlines a relationship matrix of different management approaches towards corporate entreprenerieal activities, where he measures the opportunity cost of the existing businesses and the level of operational "slack" available for the company to determine any available project outliers (Burgelman, 1983). Management can support or shutdown the new venture depedning its potential of success (Burgelman, 1983). By having this approach, the company will be able to limit the number of unsuccessful projects launched.

	Top Management's Perception of the Opportunity Cost of Current Business: Low	High
Slack Available at Operational Level: Low	Top management does not want, and operational participants do not provide, many entrepreneurial projects. <u>Result:</u> minimum emphasis on autonomous strategic behavior loop.	Top management wants, but operational participants do not provide, many entrepreneurial projects. <u>Result:</u> force the autonomous strategic behavior loop. Jump into just any projects available. Projects end up as "failures."
High	Top management does not want, but operational participants do provide, many entrepreneurial projects. <u>Result:</u> suppression of the autonomous strategic behavior loop. New projects end up as "orphans" or "misfits."	Top management wants, and operational participants provide, many entrepreneurial projects. <u>Result:</u> maximum emphasis on autonomous strategic behavior loop.

Figure 9: Generic situations concerning the state of corporate entrepreneurship in large complex organizations. Adapted from Burgelman (1983)

Chapter 4: Corporate Entrepreneurship, Corporate Venturing and Corporate New Business Development

Overarching Forms of Corporate Entrepreneurship

Thornberry (2003) offers a consolidated view of corporate entrepreneurship and new business development. Although, this is a short list of what could be considered entrepreneurial activities at the corporate level, nevertheless, it incorporates several concepts imbedded within each type. Each of these forms is a derivative of many other forms of corporate entrepreneurship. For example, corporate venturing includes internal and external corporate venturing. Therefore, the approach of this study is to take a holistic view of the most prevalent types of corporate entrepreneurship.

He describes four types of corporate entrepreneurship (Thornberry, 2003):

1. "Corporate venturing"
2. "Intrapreneuring"
3. "Organizational transformation"
4. "Industry rule-breaking"

"Corporate venturing" is when a company ventures into another business segment through utilizing an existing capability or method of doing a service or creating a specialized product (Thornberry, 2003). There will be a more in depth view of this type of venturing followed with analysis of the different types of corporate venturing methods. Many companies have created separate corporate venturing entities that facilitate the venturing function on its behalf.

"Intrapreneuring" is identifying and mirroring the characteristics and attributes of real-world entrepreneurs on an individual level and incorporating these entrepreneurial characteristics and attributes into a large organization. By doing this, the large company can acquire entrepreneurially stimulated behaviors that will contribute to creating new business opportunities for the company (Thornberry, 2003).

"Organizational transformation" or as Thornberry (2003) coins it "*corporate renewal*" is when a company shifts, transforms, transitions or creates a new way of doing business. It can achieve this both organizationally and operationally and create new value for the company (Thornberry, 2003). In order to maintain their competitiveness and be able to compete in a fast and growing global environment, companies need to systematically renew themselves. This entails that companies transform their organizational structures, human resource policies and management/employee interactions to create the sought after entrepreneurial ecosystem (Merrifield, 1993). This form of corporate entrepreneurship is seen to have many types, but the prevailing theme is its transformative attribute to adapt to a new challenging environment.

The "industry rule-breaking" type which is when a company attempts to disrupt the industry of which it is a part of through competitively setting its product and service prices in conjunction with maintaining consistently high quality standards (Thornberry, 2003). Companies that fall under this type are non-conformists and create their own destinies. They are generally smaller firms that are more agile and dynamic and have a strong affinity for higher risk taking.

Analyzing these corporate entrepreneurial types, the question that arises is whether or not these types of activities can be deployed in different settings to create consistent results for the company? The answer depends on the type of deployment. If thoughtfully deployed then it is possible to systematically and successfully produce entrepreneurial activities across the entire organization (Thornberry, 2003).

Corporate Venturing a Dominant Approach to Sustainable Corporate Entrepreneurship

Although challenging for companies to continuously shift, it is imperative that they are able transform their corporate mindset to be more entrepreneurially driven. In order to foster a culture that supports corporate entrepreneurial initiatives, companies need to adopt a sense of risk taking in managing day-to-day activities. Corporate venturing is a way for a company to grow and transform itself (Gunther McGrath et al., 2006).

In the "*Secret Diary of Corporate Venturing*" article, Julian Birkinshaw (2005) creates a comparative analogy between the person and the organization. He highlights unique characteristics of entrepreneurial companies and likens them to the characteristics of parents. He compares the corporate venture, which is a form of corporate entrepreneurship (Thornberry, 2003) with the relevant people that work in the corporation. In his comparison, he equates the corporate venture to a parent that cares for his or her children.

In essence, Birkinshaw's (2005) comparative analogy confirms that companies with a corporate venturing entity behave in a caring and nurturing fashion for their startup ventures. The employees involved are the integral part of the success or failure of the new venture "Like problem children, if they're not handled well corporate ventures can cause their parents financial heartache and make them wish they'd never been born. But they can bring rich rewards if gently nurtured to their best ability" (Birkinshaw, 2005). It is true, that when careful attention is given to new ventures, the financial rewards trump the potential failures. Adopting a process-oriented approach maintains consistency in new venture creation.

People are the backbone of every company's success or failure. People in a company are the employees and managers that are responsible for the operation and growth of the business. Furthermore, each individual within the company has a role of either helping the company grow and flourish or becomes a reason for it to fail. It is this type of thinking that enables the differentiation between entrepreneurship on an individual level and on the corporate level.

Large companies utilize corporate venturing in order to create new businesses by creating a separate entity that manages the new business and facilitates its growth, they accomplish this by behaving entrepreneurially (Birkinshaw, 2005). This entrepreneurial behavior confirmed by Birkinshaw (2005) outlines four types of corporate venturing: "Ecosystem venturing", "Innovation venturing", "Harvest venturing" and "Private equity venturing" (Birkinshaw, 2005).

"Ecosystem venturing" is an approach taken by a company to help it create an all-inclusive environment for all its stakeholders involved in its business ecosystem. An example supporting this type of venturing is Intel Capital, where, the strategy adopted by Intel Capital is to invest in companies that are closely related to directly growing Intel's microprocessor business (Birkinshaw, 2005). These companies are typically smaller in scale relative to Intel, however, if invested in early enough, these companies can create breakthrough technological innovations that will potentially support the growth of Intel's overall business (Birkinshaw, 2005).

"Innovation venturing" is when the approach of a large company is to provide funding for pure basic research activities with eliminating or minimizing the bureaucracy that comes along with funding small scale, breakthrough and highly embryonic research projects (Birkinshaw, 2005). Since these companies are not expected to generate short term returns, the emphasis is on the innovativeness of the project (Birkinshaw, 2005).

In "harvest venturing", the approach focuses on identifying the areas of the business that can be either sold to another company as a whole entity or to create licensing opportunities that foster additional new revenue for the firm. Literally, it is an opportunity to nurture concepts until they are ready to be commercialized or large enough to be spun out into separate revenue generating businesses (Birkinshaw, 2005). The term's description is consistent with harvesting crops. Where there is a period spent on nurturing the crops until ready to be sold to customers.

In "private equity venturing", the larger corporation creates a private equity arm that performs private equity activities within the context of the larger corporation. It performs investments to create new business venturing opportunities for the organization. It also supports and helps the company in its day-to-day operation and also focuses on creating synergistic new businesses that aim to improve the company's overall performance (Birkinshaw, 2005).

New Business Development Approaches

Companies that seek growth, position themselves strategically for successfully growing their business. They do so by utilizing unique new business development approaches that increase the opportunity for success (Roberts, 1980). In order for a company to determine the best method to create new and successful businesses it needs to have a high level of flexibility. Flexible organizations are able to better maneuver through different new business development modes. It allows them the opportunity for controlled trial and error until a successful venture is eventually created.

Analyzing different new business development approaches Roberts and Berry (1985) develop a framework that organizations could follow to successfully and sustainably create new businesses from within. These "mechanisms" summarized in Table 3, if utilized properly would create consistent growth and profitability for the company. However, an organization needs to carefully select which method works best for it in order to decrease the possibility of failure, as not being careful in selecting the proper mechanism could be risky (Roberts & Berry, 1985).

New Business Development Mechanisms	Major Advantages	Major Disadvantages
Internal Developments	• Use existing resources	• Time lag to break even tends to be long (on average eight years) • Unfamiliarity with new markets may lead to errors
Acquisitions	• Rapid market entry	• Now business area may be unfamiliar to parent
Licensing	• Rapid access to proven technology • Reduced financial exposure	• Not a substitute for internal technical competence • Not proprietary technology • Dependent upon licensor
Internal Ventures	• Use existing resources • May enable a company to hold a talented entrepreneur	• Mixed record of success • Corporation's internal climate often unsuitable
Joint Venture or Alliances	• Technological/marketing unions can exploit small/large company synergies • Distribute risk	• Potential for conflict between partners
Venture Capital and Nurturing	• Can provide window on new technology or market	• Unlikely alone to be a major stimulus of corporate growth
Educational Acquisitions	• Provide window and initial staff	• Higher initial financial commitment than venture capital • Risk of departure of entrepreneurs

Table 3: A summary of the types of new business development approaches with advantages and disadvantages of each. Adapted from Roberts and Berry (1985)

Roberts and Berry (1985) explain that the various concepts are relevant to the relative experience of larger organizations, "Internal Developments" for instance are as the name suggests, new business activities that are created from within the larger organization by utilizing existing organizational capabilities (Roberts & Berry, 1985). Since the venture is typically in a new business area that is not part of the organizations specialty, these "Internal Developments" depend on entrepreneurially driven employees, also known as "intrapreneurs" to successfully create the new business (G. Pinchot, 1985). The fact that the area of the new business is unknown creates an additional challenge, which is why the inherent and necessary skills of intrapreneurs may likely increase the probability of success.

Another type of new business approach is the concept of "Acquisitions" (Roberts & Berry, 1985). It is a method that allows companies to enter into new product or service markets with the least amount of time and resources (Roberts & Berry, 1985). There is a dual benefit for both companies involved in the acquisition process, it may be called a "complimentary acquisition" such as when a large technology company that is a prominent incumbent in an industry, strategically acquires a smaller startup in order to access technical competencies that are either unavailable or too expensive and time consuming to create internally (Roberts & Berry, 1985). Roberts and Liu (2002) elaborate on this concept by stating "well-established technology companies often acquire startups. The acquired companies get access to a wider range of resources, and the acquirer gains critical competitive technologies that would have been costly to develop in-house" (Roberts & Liu, 2002). The complimentary benefits for each organization create the ability to mitigate any technical, business or operational gaps. In some cases the acquisition approach is designed to capture the knowledge and the knowhow of a specialized company to fill existing knowledge gaps (Sabin, 1973).

In some cases companies may elect to not pursue a full acquisition of another company. As there may be a requirement for a significant amount of expenditures in order to complete the transaction, along with probable regulatory issues that may arise. Therefore, another less aggressive approach is the process of "Licensing" (Roberts & Berry, 1985). The process allows the company to access the technology, however, it also makes the company dependent of the technology owner, which may create an additional burden on the company. This approach is prevalent in the technological advanced fields. Some smaller companies use this approach as a strategy. Smaller startups have a strategic goal of growing large enough just to get the attention of the larger firms to get acquired and allowing the founding team larger returns on the initial investment.

Acquisitions could come in different forms as well. As Robert and Berry (1985) outline the concept of "Educational Acquisitions" which are acquisitions that allow the firm to have a faster buildup of the sought after competencies that may not be easily obtained if the firm conducts smaller investments (Roberts & Berry, 1985). This type of acquisition ramps up specific competency buildup that the incumbent is seeking to acquire. Roberts and Berry (1985) discuss the example of the Procter and Gamble Company (P&G), where in its 1983 Annual Report P&G highlight that "in June, the Company purchased a privately-held, soft drink bottling company with plants in Lexington and Louisville, Kentucky. This acquisition is a logical step in the further development of our experience in the soft drink business. Also acquired during the past year was the Tender Leaf Tea brand which, while in limited distribution, provides an initial learning opportunity in a growing category of the beverage business" (Procter and Gamble Company, 1984; Roberts & Berry, 1985). Clearly the basis for the acquisition was to allow P&G to further its knowledge and learn more about a new business it was pursuing.

However, their needs to be special care taken before undergoing an acquisition of this type, since there is great uncertainty when purchasing a company. The company that is conducting the acquisition needs to have a very high understanding and self-awareness of its capabilities in order to be better able to fill the competency gaps. Another example is outlined by Sathe (2003), where knowledge acquisitions were seen in the example of American and European companies moving into new geographic markets like the expanding into Asia in order to enter new and more diverse markets. By doing so, the American or European firms were able to create new potential growth opportunities beyond their borders (Sathe, 2003).

Roberts and Berry (1985) discuss the process of "Internal Ventures" (Roberts & Berry, 1985). Internal venturing or corporate venturing as mentioned previously, is an internal venturing vehicle that enters into a new business through forming a separate entity within the company that is charged with pursuing new venture opportunities in different products or services and different market segments (Roberts & Berry, 1985). The nature of "Internal Ventures" is similar to establishing a small startup company, where the larger organization ventures into a new market through creating a small internal business entity that has similar characteristics of a startup such as being smaller in size, leaner in its structure and more specialized technologically. The internal venture although starts off within the larger organization, the goal is to nurture it until it eventually becomes a separate entity able to survive on its own merits (Birkinshaw, 2005). These types of ventures are what create entrepreneurial pockets across the larger organization. Providing employees with the opportunity to become leaders of new smaller companies creates a constant flow of employees in the company that seek to become corporate entrepreneurs.

Another new business development strategy that organizations can utilize to enter into a new market is what Robert and Berry (1985) call "Joint Ventures or Alliances" (Roberts & Berry, 1985). The idea behind this type of new business development strategy is for companies to find synergies between each other. Table 4 shows some joint venture examples that occurred between larger firms and smaller firms aligning themselves with each other in order to benefit from the existing resources and capabilities available at each (Roberts & Berry, 1985).

Examples of large/small company joint ventures

Large company	Small company	Area of joint venture
American Broadcasting Co.	Technical Operations	Black-and-white film transmitted for color TV viewing
American District Telegraph	Solid State Technology	Industrial security systems
Bell & Howell	Microx	Microfilm readers
Dravo	Anti-Pollution Systems	Molten-salt pollution control systems
Elliott (division of Carrier)	Mechanical Technology	High-speed centrifugal compressors
Exxon Nuclear (division of Exxon)	Avco Everett Research Laboratory	High-energy laser uranium isotope separation and enrichment
Ford Motor	Thermo Electron	Steam engines for automobiles
General Electric	Bolt Beranek & Newman	Hospital computer systems
Johnson & Johnson	Damon	Automated clinical laboratory systems
3M	Energy Devices	Updatable microfilm systems
Mobil	Tyco Laboratories	Long-crystal silicone solar conversion technology
Pitney Bowes	Alpex Computer	Electronic "point of sale" checkout systems
Roche Electronics (division of Hoffmann-La Roche)	Avco Everett Research Laboratory	Inflatable balloon heart assist systems
Wyeth Laboratories (division of American Home Products)	Survival Technology	Self-administered heart attack drug and injection systems

Table 4: Examples of large companies and smaller companies entering into joint ventures. Adapted from Roberts (1980)

The smaller firms provide the technical know-how and entrepreneurial drive as they operate in a leaner more flexible manner. Larger firms on the other hand provide access to untapped markets that smaller firms would not typically be able to reach due to the limitations of its size and available financial and marketing resources (Roberts, 1980). For this type of new business approach to succeed, the management on both ends needs to be interconnected. One of the challenges that face these types of alliances is that corporate cultures may collide. Companies that are smaller will have a culture of speed and risk taking with little or no controls. However, companies that are larger will have the opposite structure. Therefore, to avoid any potential disruptions to the agreement, companies need to conduct the necessary due diligence prior to entering into a joint venture or alliance. The key success factor is to create a win-win situation, a complimentary arrangement that creates success for all parties involved.

The concept of "Venture Capital and Nurturing" presented by Roberts and Berry (1985) is a way for large companies to enter into new markets through forming a corporate venturing arm that invests in small stakes in strategically important smaller-scale businesses. A venture capital entity in a company also known as the corporate venture capital arm needs to be independent from the overall organization. It needs to be funded and managed separately and the people working in it must have their own administrative and career progression processes in place. If managed properly, corporate venturing is a way for companies to create new business opportunities that could generate growth and business variety for the organization (Burgelman, 1984). In some cases, depending on the venturing model used and the experience of the larger organization, it may invest in fully or partially in smaller emerging startup businesses (Roberts & Berry, 1985). Patience is important in this type of venturing, since it requires on average eight to ten years before it starts to generate good returns on the original investment (Biggadike, 1979).

It is important for a company to utilize each strategy based on its "base business" (Roberts & Berry, 1985). If a company significantly deviates from its core through entering a new business that is too different from its core capabilities, then the company may create unnecessary risk that could jeopardize its level of success. Robert and Berry (1985) give a proposal for how companies can manage the risk of entering into a new business. Figure 10 shows an integrated approach of utilizing the "*Familiarity Matrix*" as a guide for the company to help it in the selection of which new business strategy provides the optimal results (Roberts & Berry, 1985). Selecting the appropriate new business strategy depends on the company's existing "familiarity" with the new products, services, technologies or markets and with its level of corporate involvement whether on the high end or the low end (Roberts & Berry, 1985). The combination of both elements gives a higher probability for selecting the optimal new business approach. The logic is that companies will minimize the level of uncertainty that is associated with the new business venture, and have a more robust process to execute an entry strategy, as they will be working in familiar areas of business.

Market Factors	Optimum Entry Strategies		
New Unfamiliar	Joint Ventures	Venture Capital or Venture Nurturing or Educational Acquisitions	Venture Capital or Venture Nurturing or Educational Acquisitions
New Familiar	Internal Market Developments or Acquisitions (or Joint Ventures)	Internal Ventures or Acquisitions or Licensing	Venture Capital or Venture Nurturing or Educational Acquisitions
Base	Internal Base Developments (or Acquisitions)	Internal Product Developments or Acquisitions or Licensing	"New Style" Joint Ventures
	Base	New Familiar	New Unfamiliar

Technologies or Services Embodied in the Product

Figure 10: New business strategies integrated with the familiarity matrix. Adapted from Roberts and Berry (1985)

Frameworks for Creating Sustainable New Business Development

Companies don't only grow by creating and venturing into new products and services; they grow by creating new business opportunities beyond their existing product and service portfolio, which allows the company to systematically transform itself and grow (Karol, Loeser, & Tait, 2002). One strategic approach a company could take is to review, assess and evaluate its existing internal capabilities and organizational structures to develop processes that increase the opportunities for new businesses to be created. Similar to Roberts and Berry's (1985) concept of familiarity, in Figure 11 Karol, Loeser, & Tait (2002) show a similar view that focuses on understanding the nature of the new business venture in terms of its relevance to products, services, markets, customers, geographic location and selecting the most appropriate strategy to enter into the new business venture (Karol et al., 2002).

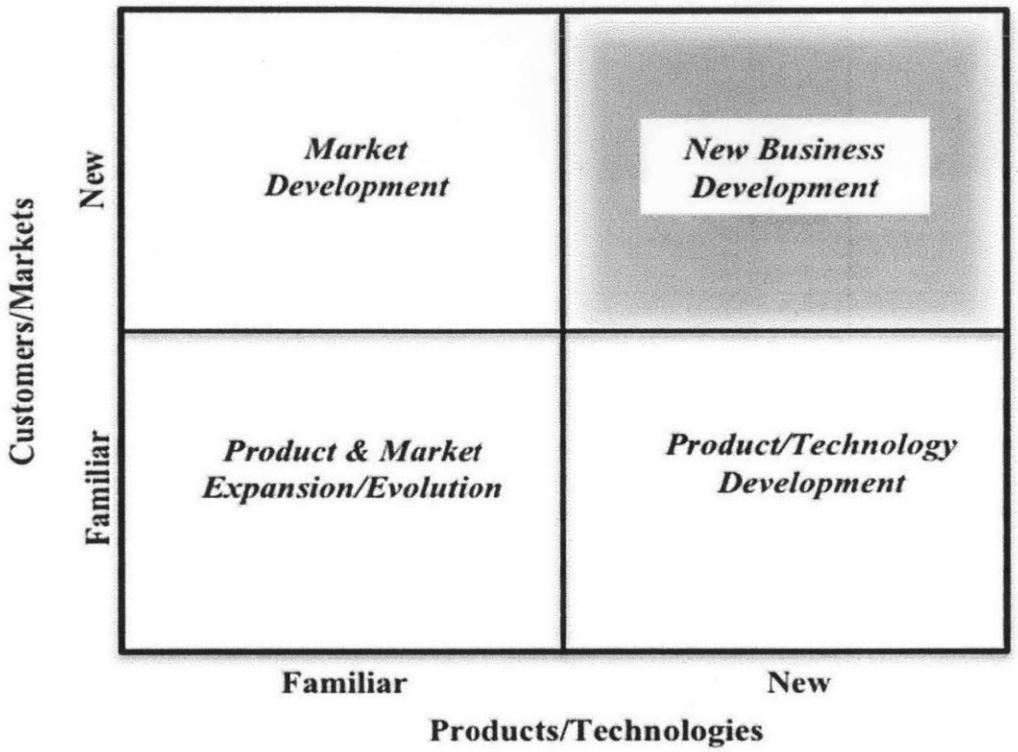

Figure 11: Types of new business development processes, adapted from Karol, Loeser, & Tait (2002)

An integral part of any company's success is its ability to consistently create new growth opportunities for itself. These opportunities cover a broad range of activities relating to the operation, management and productivity of the company. This ability to successfully create new opportunities is a critical competency that companies need to develop. Sathe (2003) provides an analysis of corporate new business development. He describes the basic constructs behind the word "*new*" especially in situations that relate to creating new ventures internally from within the company. To consistently generate new ideas is better achieved through adopting a methodical process approach. This is why it is imperative that companies learn different methods to create new businesses in a systematic way and sustainable way.

Sathe (2003) discusses the example of the Honda Motor Company Ltd. (Honda) to support his ideas of how new businesses can be created from within the company. Originally Honda's core business focus was on the design and manufacture of motorcycles. In comparison to vehicles, motorcycles have a unique and different design and functionality, however, due to Honda's strong competency in designing and manufacturing motorcycles, it was able to incrementally transform its business into designing and manufacturing vehicles (Sathe, 2003).

He further highlights the importance of the concept of "newness" in corporate new business development, where it is important for a company to venture into new products or markets based on existing capabilities and competencies (Sathe, 2003). Analyzing the broader scale of new business development activities, the key for a company to create new businesses through new business development activities is to quickly pursue new entrepreneurial initiatives and try to fail or succeed quickly (Sathe, 1989). This will create a cycle of knowledge gaining from the successful and unsuccessful projects launched. It will also help the company create processes to better manage new business ventures.

In their research on competitive corporate entrepreneurship, Covin and Miles (1999) highlight the importance of "performance" and "competition" in reshaping the company (Covin & Miles, 1999). "The element that we believe, must exist in conjunction with innovation in order to claim an entrepreneurial orientation is the presence of the objective of sustaining high performance or improving competitive standing through actions that radically energize organizations or "shake up" the status quo in their markets or industries" (Covin & Miles, 1999). The stress on process and performance improvement is evident. If companies behave in a manner that improves their performance and maintain their competitiveness then they are able to achieve that through new business venturing. Moreover, in order for a company to be able to create the entrepreneurial environment necessary, it needs to adopt thinking, believing and behaving "out of the box". It needs to have the ability to naturally rebel from the norms and swim opposite the conventional streams no matter how strong the currents.

Covin and Miles (1999) analyze the prevailing corporate entrepreneurship forms that appear in companies across different industries. In their research, they define four types of corporate entrepreneurship methods that are over arching concepts for, "Sustained Regeneration", "Organizational Rejuvenation", "Strategic Renewal" and "Domain Redefinition" which are shown in Table 5 (Covin & Miles, 1999). As previously indicated by Sathe (2003), the themes are reoccurring, were words like "regeneration", "rejuvenation", "renewal" and "redefinition" all fall under the concept of newness (Sathe, 2003).

Form of Corporate Entrep.	Focus of Corporate Entrep.	Typical Bais for Competitive Advantage	Typical Frequency of New Entrepreneurial Acts	Magnitude of Negative Impact if New Entrepreneurial Act is Unsuccessful
Sustained Regeneration	New Products or New Markets	Differentiation	High Frequency	Low
Organizational Rejuvenation	The Organization	Cost Leadership	Moderate Frequency	Low-to-Moderate
Strategic Renewal	Business Strategy	Varies with Specific Form Manifestation	Less Frequent	Moderate-to-High
Domain Redefinition	Creation and Exploitation of Product-Market Arenas	Quick Response	Infrequent	Varies with Specific Form Manifestation and Contextual Considerations

Table 5: Summary of corporate entrepreneurial forms. Adapted from Covin and Miles (1999)

In order for a company to display "Sustained Regeneration" attributes, it needs to be highly innovative (Covin & Miles, 1999). A company that experiences this type of corporate entrepreneurial form is systematic in its business operation, where it continuously strives to create new services and new products and operate in markets beyond its own (Covin & Miles, 1999). Regeneration ensures that the company maintains its competitive edge. Innovation is a key component of this form of corporate entrepreneurship and it is evident that a company that strongly expresses this characteristic is more aggressive in entering new product markets (Covin & Miles, 1999). It is imperative that the company adopts a sustained way of doing business. The success of new business creation is lessened if there is a large gap between initiatives. The company needs to develop operational stamina to continue being able to create new products and enter new markets.

"Organizational Rejuvenation" on the other hand is a phenomenon that relates to the internal processes that the company executes. The company refreshes its management philosophy through implementing internal changes and transformations in its organizational processes. These changes are designed to increase the company's competitive stance (Covin & Miles, 1999). This phenomenon is similar to the concept of corporate renewal (Merrifield, 1993). The company goes through several iterations on an organizational level to "restart" its operations. Covin and Miles (1999) differentiate "Organizational Rejuvenation" from "Strategic Renewal", where "Strategic Renewal" is concerned with the external variables that impact the company (Covin & Slevin, 1991). These variables are outside the boundary of the company, and create an additional challenge for growing entrepreneurial behaviors from within the company. These apparent challenges are in concurrently opportunities to conduct necessary strategic shifts that will enable the company to survive and overcome any impeding challenges. It allows the company to recalibrate itself and set a new direction (Covin & Miles, 1999).

The companies that have an early mover advantage when entering a new market are described by Covin and Miles (1999) as companies that use the form of corporate entrepreneurship known as "Domain Redefinition" (Covin & Miles, 1999). In this type of corporate entrepreneurship type, the company moves quickly to create a new market and by doing so becomes an early player in the newly created market. Therefore, the company deliberately redefines the market and develops a competitive advantage that separates it from the competitors that follow (Covin & Miles, 1999). The process of redefining the domain can be achieved through different means, such as creating new products, services or technologies that are yet to be explored or invented (Covin & Miles, 1999).

Chapter 5: Intrapreneurship and Business Model Innovation as Forms of Corporate Entrepreneurship

Role of Intrapreneurship in the Creation of a Corporate Entrepreneurship Culture

Intrapreneuring is the concept of transforming individual employees' entrepreneurial contributions into value added results for the company. Companies emphasize corporate entrepreneurship activities to increase new venture success stories and promote an innovative environment for employees to grow businesses from within the organization (Kuratko, Montagno, & Hornsby, 1990).

In his seminal book on the concept of "*Intrapreneuring*", Pinchot (1985) makes a definitional distinction between conventional entrepreneurship, which occurs outside the corporate boundaries and "intrapreneurship" which is the occurrence of entrepreneurship within the boundaries of the organization. Pinchot (1985) defines the *intrapreneurs* as "any of the "dreamers who do." Those who take hands-on responsibility for creating innovation of any kind within an organization. The intrapreneur may be the creator or inventor but is always the dreamer who figures out how to turn an idea into a profitable reality" (G. Pinchot, 1985). Pinchot (1985) describes the entrepreneur outside the corporate environment as "someone who fills the role of an intrapreneur outside the organization" (G. Pinchot, 1985). He provides a clear distinction between entrepreneurial behaviors within the boundaries of a company and compares it to what happens outside the boundaries of the organization.

By analyzing the distinction Pinchot (1985) makes between the two concepts, it is apparent that some central features standout. The first is how he considers creativity and imagination as important core attributes that an individual must have in order to become an intrapreneur and be able to innovate. In his definition, Pinchot (1985) highlights the importance of creativity in creating innovations that help grow the business from within. Creativity is important in several aspects, some could be related to the actual project at hand and others could be related to maneuvering across the structured corporate environment. By using the word "*dreamer*" in his definition, Pinchot (1985) may have created an uncertainty in the understanding of the characteristics of the intrapreneur. The assumption from using this word is that the intrapreneur is a person who is distant from reality, however, its relevance is quite important. By using the word in this case, he is essentially validating the importance of thinking and behaving beyond the ordinary corporate norms. Where the creativity of intrapreneurs in dreaming up possible entrepreneurial initiatives that are not obvious to the company early on will certainly create new growth opportunities for the company.

The Influence of Creativity on Corporate Innovation

Pinchot and Pinchot (1996) define innovation as "the creation and bringing into use of new products, services, processes, relationships, and methods of organization" (E. Pinchot & Pinchot, 1996). Again, the concept of newness is evident in its relation to innovative approaches. Moreover, this understanding of innovation is closely linked to corporate entrepreneurial concepts. It is clear that the idea of creativity highlighted by the authors is an imperative component that enables the organization to innovate. An organization that is innovative is an organization that is able to consistently support inventiveness in its different business approaches. Hence, it is an organization capable of creating new products and services to maintain a competitive advantage.

The importance of this type of creativity serves the intrapreneur in two ways; the first is by helping him or her in maneuvering through the expected corporate bureaucracy and operational systems. This is assuming that the intrapreneur is confined in a company that is not yet entrepreneurially driven. By having this flexibility, the intrapreneur is able to move the entrepreneurial project forward and break any possible barriers that may hinder developing the entrepreneurial initiative. The second way is by giving the intrapreneur freedom to think out of the box. The out of the box thinking allows him or her to have the opportunity to think and create a new business opportunities for the company, of course the assumption is that this individual is a self-starter and proactive in his or her approach. Therefore, if a large enough number of employees have intrapreneurial inclinations then there will likely be a positive disruption to the company's day-to-day business practices.

Another factor that Pinchot (1985) highlights is the importance of "doing". The intrapreneur as described by Pinchot (1985) is both action and profit oriented. He is also proactive in seeking out new business opportunities that are not part of his or her core job specifications (G. Pinchot, 1985). This characteristic is important since having the courage to go beyond the day-to-day job requirements greatly helps in creating internally developed new businesses.

Furthermore, on the corporate level, in order for a large company to commercialize a new product and create a new venture, it needs to create a supportive corporate innovation environment that continually promotes innovative activities (G. Pinchot, 1985). However, creating such an environment is a challenging feat for large companies to achieve. Figure 13 shows the simple and structured approach to innovation. The main aspect is conformity, since companies have a preference to operate within traditional comfort zones and adopt traditional approaches instead of jumping into new entrepreneurial ventures (G. Pinchot, 1985).

Pinchot (1985) distinguishes between the conventional and unconventional business planning cycles where in Figure 14 he shows how the innovation process actually works. Incorporating the unexpected shifts in the planning cycle large firms undertake to foster an innovative environment (G. Pinchot, 1985). In the conventional setting, the steps are relatively simple and are designed to allow the company's management to be more risk averse. The planning cycle starts with setting the organizational goals, and then moves on to the planning process to fulfill the set of organizational goals through the implementation of the required actions necessary to complete the cycle.

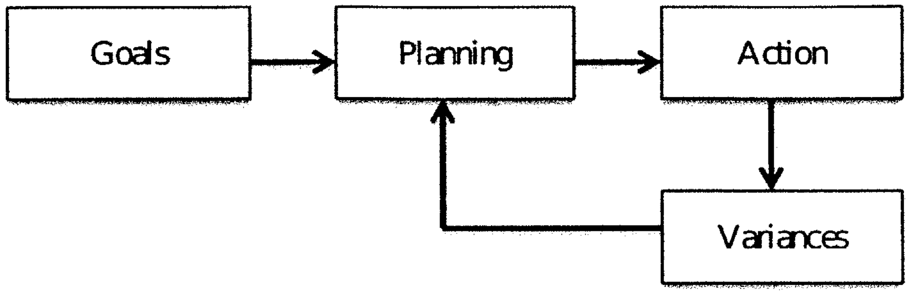

Figure 13: The traditional planning cycle adapted and developed from Pinchot (1985)

Pinchot (1985) includes "variances" in his description of the more complex version of the planning cycle to account for market, product or technological variances that an organization may naturally encounter (G. Pinchot, 1985). In contrast to the simpler and more risk aversive planning process, Pinchot (1985) attempts to describe the more complex planning process illustrating how the innovation process actually occurs in large organizations. The reality is that there will be a certain level of accepted ambiguity and uncertainty during the startup process of a new venture. The unknowns overcome the known in these situations, which creates a more cyclical process that has a nonlinear nature.

In fact, as Pinchot (1985) describes it, the resulting ambiguity creates the opportunity for failure, where the intrapreneur would likely experience several failures throughout the development of the new venture, and due to this iteration of failures, the intrapreneur will likely acquire learning opportunities and will have to adjust the project plan accordingly (G. Pinchot, 1985). This is not a negative outcome of the innovation planning cycle, in actuality, the phenomenon creates learning opportunities for the company that are valuable inputs to help progress the development of new businesses. Companies need to be conscious to this fact and always instill a formal process to capture the lessons learned from success stories or failures.

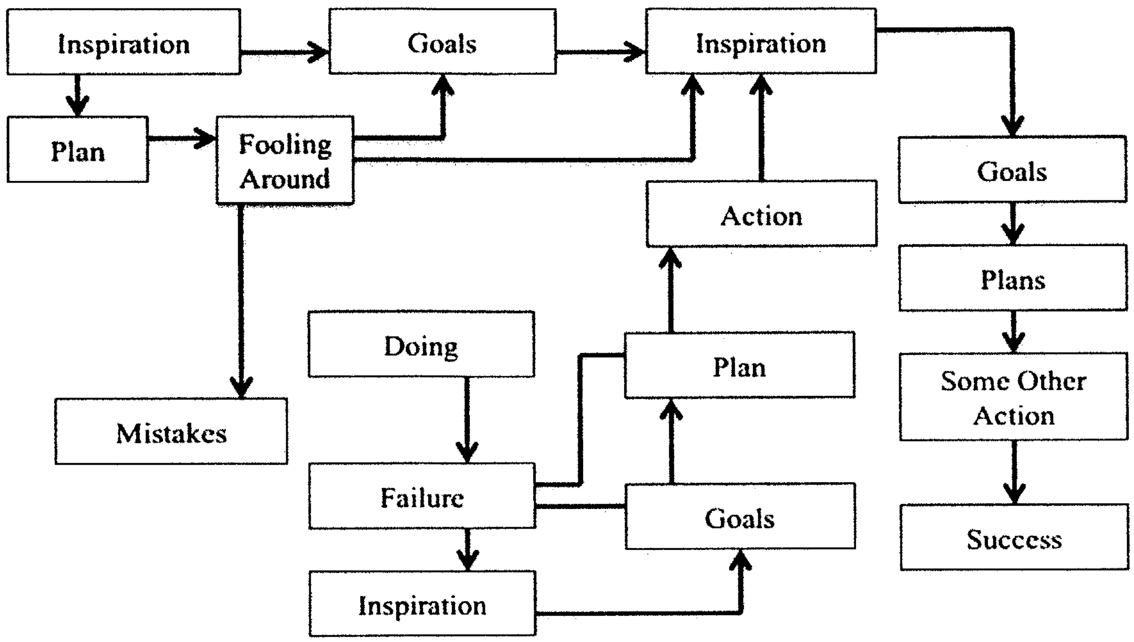

Figure 14: How innovation actually works adapted and developed from Pinchot (1985)

Ireland, Kuratko and Morris (2006) hypothesize that intrapreneurship attributes exist within all employees in a company (Ireland et al., 2006). They believe that having entrepreneurial tendencies is an intrinsic characteristic that is inherent within each employee and depending on the corporate environment, these intrapreneurial attributes will emerge (Ireland et al., 2006). This may not be a completely sound hypothesis by the authors, since the reality of the corporate world suggests otherwise. If "each" and "every" employee were inherently entrepreneurial, then based on the author's hypothesis "all" companies would "always" experience infinite growth and profitability. However, the reality proves otherwise, since historically, markets always behave in a cyclical manner, they transition from an upward cycle to a downward cycle based on the global economic environment impacting the markets.

The Optimal Corporate Innovation Process

The Prussian state mining company transformed itself from a company that primarily manages German mining interests, into a diversified conglomerate that has diverse activities covering insurance to aviation (Bessant, 2003). The transformation itself is a type of innovation that a company can use to maintain its competitive edge and survive market challenges. Understanding that a transformation is necessary is critical to the innovation process and the ability to actively adjust the business strategy is imperative for the company's survival.

In an attempt to emphasize the importance of innovative approaches to create new business opportunities, Bessant (2003) outlines a spectrum of innovative methods that a company can selectively apply depending on the type of innovative method the company chooses to deploy (Bessant, 2003). The important theme in this case is that the company needs to be able to select the optimal innovation approach to address its specific needs.

Opportunities to innovate could be done on a multitude of avenues, creating a new product for example, or developing a new service or entering a new geographical market or even entirely shifting the business to a whole new industry. If some or all of these avenues are pursued then the innovation process that is associated with creating new businesses becomes optimal (Bessant, 2003).

In order to understand the spectrum of innovation, Bessant (2003) shows in Table 6 the summary of approaches along with industry examples from previous research works that discern between innovating in a different way and innovating in a better way (Bessant, 2003). The four methods of innovating highlighted also overlap with the diverse innovative approaches previously explored. Understanding the subtle differences and subtle similarities of each approach helps better outline how a company can utilize each innovation approach to better serve its strategic goals.

	'Do better' innovation	'Do different' innovation
Product/service Innovation-change in what is offered	This is incremental product development. For example, the Bic ballpoint was originally developed in 1957 but remains a strong product with daily sales of 16 million units. Although superficially the same shape, closer inspection reveals a host of incremental changes that have taken place in materials, inks ball technology, safety features, etc.	Radical shift to new product concept for the firm, perhaps for the industry as well. An emerging example of this could be the replacement of the incandescent light bulb, originally developed in the late 19th century by Edison and Swan (amongst others). This may be replaced by the solid state white light emitting diode technology patented by Nichia Chemical. This technology is 85% more energy efficient, has 16 times the life of a conventional bulb, is brighter, more flexible in application and is likely to be subject to the scale economies associated with electronic component production
Process Innovation-change in the ways in which it is created and delivered	These are incremental improvements in key performance parameters, for example, cost reduction, quality enhancement, time reduction, etc. a good example of incremental process innovation can be found in the 'lean production' field, where intra and inter-firm efforts to drive out waste have led to sometimes spectacular performance improvements –but achieved within the same envelope established by the original processes (Womack and Jones 1997)	These are radical shifts to new process routes for the firm and, perhaps, for the industry as well. Examples are the Bessemer process for steelmaking replacing conventional charcoal smelting, the Pilkington float-glass process replacing grinding and polishing, the Solvay continuous process for alkali production replacing the batch mode Leblanc process, etc.
Position Innovation – change in the context in which it is	This includes the launching of a product or deployment of a process in familiar	This requires creating completely new markets rather than extending and

applied	context and redefining the perception of a product for customers. For example, in mobile telephones a shift has taken place from a business tool to a leisure and recreation aid, with considerable associated incremental product and process development (ring tones, cartoon displays, text messaging) emerging as a result of such positional innovation	deepening existing segments or incremental brand identity changes (Moore 1999). For example, satellite navigation was originally developed for military use, bus is now used by sailors, motorists, surveyors and even postmen. Christensen's study of the rapid evolution of the hard-disk drive industry highlights the ways in which unimagined markets can quickly become the key segment (Christensen 1997)
Paradigm Innovation – change in underlying mental models surrounding it	These are evolutionary changes in the way that business activities are undertaken that provide the opportunity for incremental innovation in paradigm or business model. An example might be rethinking the Rolls-Royce motor car business as that of supplying luxury experience, competing with expensive watches, holidays, clothes, etc., rather than as transportation mechanism	These are new business or industry models, for example, 'mass production' vs. 'craft production' (Freeman and Perez 1989). An example of a recent transformational innovation in paradigm was the development of Internet solutions to many business areas such as banking insurance, travel, etc. (Evans and Wurster 2000)

Table 6: Specific examples from previous research work showing different aspects of the innovation agenda that can be selectively adopted. Adapted from Bessant (2003)

Innovating the Business Model to Create New Businesses

In their research on corporate innovation, Sawhney, Wolcott and Arroniz (2006) define the concept of "*business innovation*" as "the creation of substantial new value for customers and the firm by creatively changing one or more dimensions of the business system" (Sawhney, Wolcott, & Arroniz, 2006). The "business system" outlined by the authors encourages taking a holistic view when pursuing corporate innovation. It provides a better understanding of the different components of the business system such as the identification of stakeholders, subsystems and system boundaries that are necessary for the overall business system to function. It is also instrumental to have creativity when innovating the business model, since the changing aspects could be in any part of the business. Being attentive to the parts of the business where the change can be implemented creatively is very important. The authors challenge the status quo of how businesses are conventionally created. Highlighting the importance of changing the business-operating environment as a means for creating corporate entrepreneurship. It is another path the company can take to enable it to foster entrepreneurial behaviors. It also helps the company implement creative business innovation practices as a corporate strategy to develop sustainable corporate entrepreneurship. In a highly competitive and technologically driven market environment, fostering innovation is imperative for a company's survival. The company needs to search for methods to continuously innovate.

Pohle and Chapman (2006) present the findings of IBM's global CEO report conducted in 2006 on business model innovation (Pohle & Chapman, 2006). One major aspect that they highlight as very important is that the trend is that companies shift their focus to different innovation types. The report shows that there is a new emphasis on developing new business model innovations. This type of innovation is on the rise compared to having a specific focus on mainly the product and service innovations as Figure 15 shows (Pohle & Chapman, 2006).

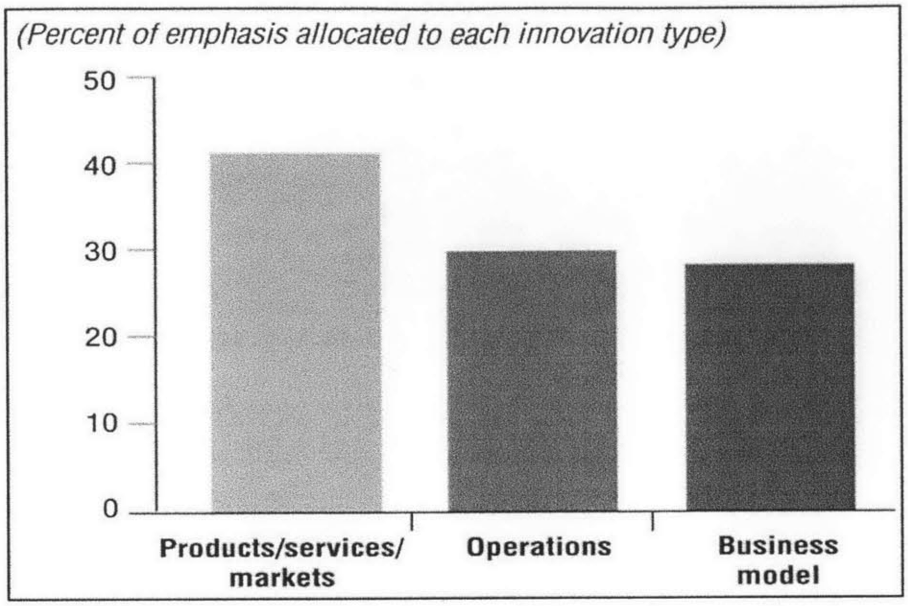

Figure 15: Depiction of the rising importance of business model innovation as indicated in IBM's global CEO report 2006. Adapted from Pohle and Chapman (2006)

Sawhney, Wolcott and Arroniz (2006) also confirm the importance of business innovation in many leading global companies as a way for them to create new businesses (Sawhney et al., 2006). One example they highlight is Starbucks Coffee Company (Starbucks), where Starbucks was able to create a new coffee consuming atmosphere that provides customers with a new and unique environment to meet friends and family beyond the typical space such as the workplace or at home all while charging the customers a premium (Sawhney et al., 2006). The company was able to innovate the business model and create unconventional premium coffee product offerings. With careful thought and consideration given to the design of the stores, the geographic locations, the ambient lighting and the furnishings used. Moreover, the product offerings and the way they are packaged and priced all contribute to creating a niche market for Starbucks that developed a large customer following (Sawhney et al., 2006).

Companies need not remain idle in the face of competition; adopting new business innovation models will create competitive advantages that will ensure that companies are still able to mitigate challenges. It is crucial that companies have the required level of adaptability to offset impacts from shifts in the business environment. These shifts may be due to technological advancements or the introduction of disruptive products and services. Adapting to these new changes or threats can be achieved through taking different measures that Pohle and Chapman (2006) outline. For example, changing the organizational structure, or partnering with companies through alliances or joint ventures, spinning-in or spinning-out parts of the company when the opportunities arises or even divesting or outsourcing parts of the business to consolidate operations. Figure 16 shows the most common business innovation approaches that companies adopt based on IBM's global CEO report from 2006 (Pohle & Chapman, 2006).

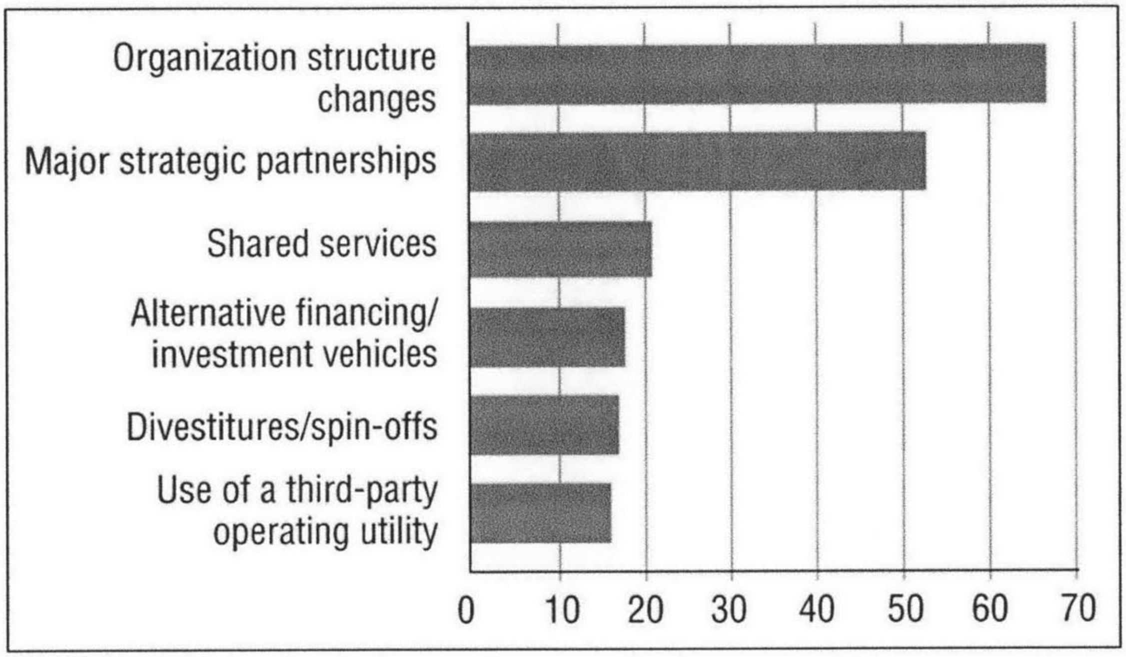

Figure 16: Representation of the most common business model innovation approaches that could be utilized in a company as presented in IBM's global CEO report 2006. Adapted from Pohle and Chapman (2006)

Dell Inc. (Dell) is a company that exemplifies business model innovation. Dell is a leading personal computer company that was able to attract a large customer base not because of its focus on advanced technological developments in hardware or software, but because Dell was able to innovate its business model and allow for a systematic process to streamline assembly, manufacturing and logistics of shipping personal computer products all around the world (Sawhney et al., 2006). This type of innovation created a new position for Dell in the personal computer business. Many companies tried to emulate them, however, Dell's strength is in its ability to continuously renew its business model in reaction to market changes.

Another way a company can innovate its business model is through targeting new and untapped market segments that are yet to be explored by competing companies, like what Home Depot Inc. (Home Depot) has successfully achieved. Home Depot was able to capture new customers that had a specific need. They wanted to fix and improve their homes by themselves (Sawhney et al., 2006). Home Depot through understanding this new business model created an opportunity for individuals to self-start home projects. Defying what typically happens in a situation like this, which is a person hiring contractors to complete small-scale home improvement construction projects. What Home Depot does is avail to customers the necessary resources such as building materials, tools, and paints. Home Depot also provides project guidance to manage small home projects. This created a new customer base for Home Depot that did not previously exist (Sawhney et al., 2006).

In order to ensure a leading edge in business competitiveness and innovativeness, creating a new business model is a method that corporate management can deploy to increase the potential of consistent company growth (Pohle & Chapman, 2006). Successfully implementing business innovation in companies requires companies to have a holistic view of their operations in a systems context (Sawhney et al., 2006).

Sawhney, Wolcott and Arroniz (2006) describe an "*innovation radar*" framework shown in Figure 17 (Sawhney et al., 2006). The framework encompasses all the relevant company dynamic elements that are important for company operations. It creates an understanding for the customers, markets, product and service offerings and the mechanism of how to develop and market these products and services to a wider customer base.

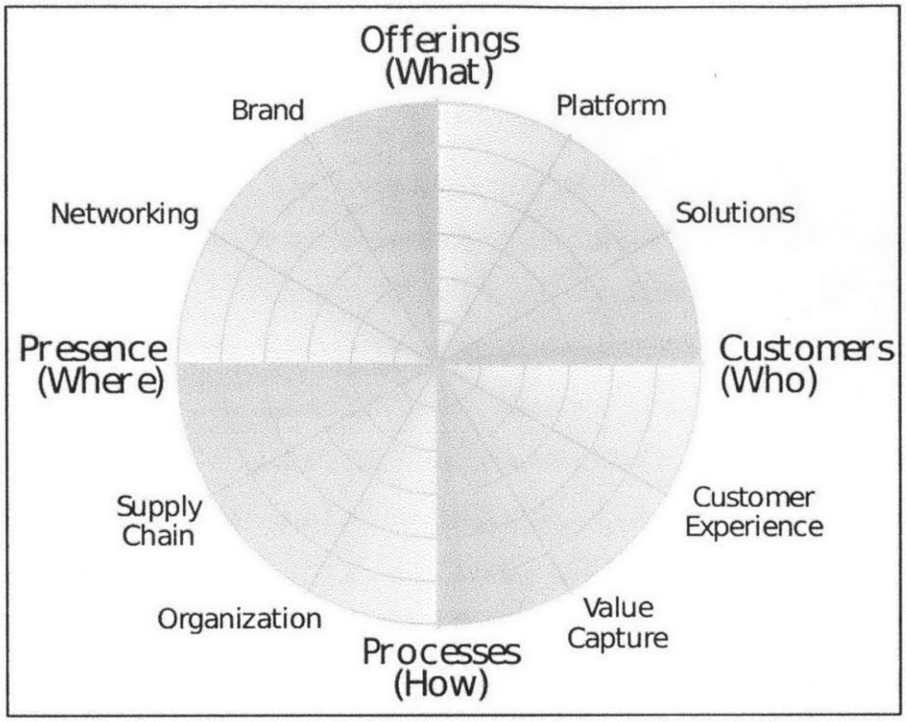

Figure 17: The innovation radar, representing the four corporate operational elements and the twelve innovation elements that a company can utilize to create new business opportunities. Adapted from Sawhney, Wolcott and Arroniz (2006)

A list of twelve innovation "dimensions" accompanied with company examples that show methods of creating new business opportunities through utilizing new innovation approaches summarized by the authors in Table 7 (Sawhney et al., 2006). Each of the twelve innovation dimensions addresses a new level of complexity. Therefore, in response, companies need to be flexible and if the innovation method is used properly, it can create a new business model. The formation of this model will be more successful if the company's competitive market environment and its capacity for risk mitigation is properly managed. Although it is considered a form of corporate entrepreneurial behavior, changing the business can only be successful if the company methodically and carefully empowers and involves its people in the process. Considering Bessant's (2003) work on the concept of *"high-involvement innovation"* successful business model innovation is achieved through the high involvement of all employee in a company (Bessant, 2003).

Dimension	Definition	Examples
Offerings	Develop innovative new products or services.	⇨ Gillette Mach3Turbo razor ⇨ Apple iPod music player and iTunes music service
Platform	Use common components or building blocks to create derivative offerings.	⇨ General Motors OnStar telematics platform ⇨ Disney animated movies
Solutions	Create integrated and customized offerings that solve end-to-end customer problems.	⇨ UPS logistics services Supply Chain Solutions ⇨ DuPont Building Innovations for construction
Customers	Discover unmet customer needs or identify underserved customer segments.	⇨ Enterprise Rent-A-Car focus on replacement car renters ⇨ Green Mountain Energy focus on green power
Customer Experience	Redesign customer interactions across all touch points and all moments of contact.	⇨ Washington Mutual Occasio retail banking concept ⇨ Cabela's store as entertainment experience concept
Value Capture	Redefine how company gets paid or create innovative new revenue streams.	⇨ Google paid search ⇨ Blockbuster revenue-sharing with movie distributors
Processes	Redesign core operating processes to improve efficiency and effectiveness.	⇨ Toyota Production System for operations ⇨ General Electric Design for Six Sigma (DFSS)
Organization	Change form, function or activity scope of the firm.	⇨ Cisco partner-centric networked virtual organization ⇨ Procter & Gamble front-back hybrid organization for customer focus
Supply Chain	Think differently about sourcing and fulfillment.	⇨ Moen ProjectNet for collaborative design with suppliers ⇨ General Motors Celta use of integrated supply and online sales
Presence	Create new distribution channels or innovative points of presence, including the places where offerings can be bought or used by customers.	⇨ Starbucks music CD sales in coffee stores ⇨ Diebold RemoteTeller System for banking
Networking	Create network-centric intelligent and integrated offerings.	⇨ Otis Remote Elevator Monitoring service ⇨ Department of Defense Network Centric Warfare
Brand	Leverage a brand into new domains.	⇨ Virgin Group branded venture capital ⇨ Yahoo! as a lifestyle brand

Table 7: The twelve innovation elements that a company can utilize to create new business opportunities through business innovation. Adapted from Sawhney, Wolcott and Arroniz (2006)

For example, Toyota Motor Corporation (Toyota) displays business model innovation by optimizing automobile manufacturing processes. It utilizes the "Toyota Production System" (TPS), which creates a competitive advantage over other automobile manufacturing company processes (Osono, Shimizu, & Takeuchi, 2008). By implementing the innovative TPS process, Toyota is able to streamline production and build high quality automobiles at lower production costs (Osono et al., 2008).

Chapter 6: Framework Models for Sustainable Corporate Entrepreneurship

Drucker (1985) describes the concept of "*Systematic Entrepreneurship*", highlighting that sustainable entrepreneurial activity can be the result of deploying a systematic approach to create new businesses. He highlights companies such as McDonalds, which is a company that innovates the way hamburgers are made through adopting a very process oriented systematic business model (Drucker, 1985). Although McDonalds was not the first mover or innovator in making hamburgers, it was one of the first companies to deploy system methods and approaches to produce new fast food products. This gave McDonalds a huge competitive advantage in the fast food industry.

One of the ways that companies can optimize benefits from deploying corporate entrepreneurship methods is systematically generating internal entrepreneurial activities. Kuratko, Hornsby and Goldsby (2004) outline a sustainable way to deploy corporate entrepreneurship in an organization by utilizing a systematic corporate entrepreneurship model shown in Figure 18 (Kuratko et al., 2004). The model contains essential factors; the first factor is the individual impact that company employees have within the company. These employees, through behaving entrepreneurially, are able to systematically generate innovative ideas that can translate into profit generating projects for the company. The second factor is management's entrepreneurial flexibility, where the management team needs to be able to support the entrepreneurial initiatives that are launched by their employees whether part of the regular planning business cycle or not (Kuratko et al., 2004). Without both of these components complimenting each other, the likelihood of sustainably evolving corporate entrepreneurial initiatives in the company is reduced. The Kuratko, Hornsby and Goldsby (2004) model allows for both an "individual level comparison" and a "firm level comparison" to occur, each with a focus on the employee in the company as an individual and the management of the company which oversees the employees (Kuratko et al., 2004).

Describing the components of the model, Kuratko, Hornsby and Goldsby (2004) outline the impact of what they call the "external transformational trigger". The authors coin the term "*jolts*" when describing the impact of these external triggers. Since the external changes that impact a company create an associated shock that forces the company to transform itself into a more entrepreneurially driven enterprise (Kuratko et al., 2004).

The authors emphasize examples that trigger transformation in the organization such as technological disruptions, global economic changes and the threat of potential acquisitions. The company's management, in response to these triggers, is likely going to transform itself through adopting a corporate entrepreneurship strategy that mitigates negative repercussions resulting from inaction (Kuratko et al., 2004).

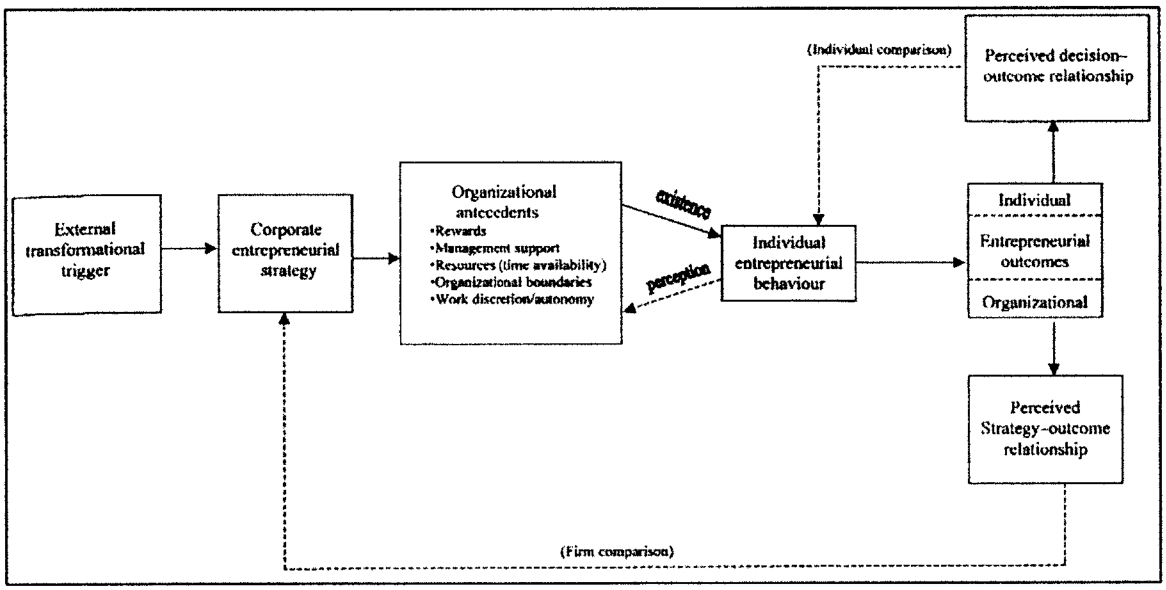

Figure 18: A model of corporate entrepreneurial strategy. Adapted from Kuratko, Hornsby, and Goldsby (2004)

In the Kuratko, Hornsby and Goldsby (2004) model, there is also an emphasis on the company's need to develop a "corporate entrepreneurial strategy" to address the challenges that are a result of the "*jolts*" that occur when venturing into a new business (Kuratko et al., 2004). When it is needed, the company's management is responsible to create a new corporate entrepreneurial strategy that determines what new products are needed to be developed and what new markets should the company consider entering and where geographically can the company find a better opportunity for growth (Kuratko et al., 2004). The strategically aligned approach ensures that flexibility is maintained when determining the optimal model structure to follows.

In order to successfully implement this part of the model it is important for the company's management to be flexible in setting the direction. Since corporate entrepreneurial strategies need to be fluid and follow the natural progress of the new venture. In order to achieve favorable results, the company's management must be able to transform its corporate mindset entirely to support sustaining entrepreneurial activities.

The "organizational antecedents" described by Kuratko, Hornsby and Goldsby (2004) are imperative to support the transformation of the organization from following the status quo to behaving in a more entrepreneurial mode (Kuratko et al., 2004). The critical organizational elements that need to be present in order for sustainable new corporate entrepreneurial activity to succeed within the organization is "management support", where management needs to be less bureaucratic and authoritarian and allow operational flexibility (Kuratko et al., 2004). "Use of rewards", which is important because having a relevant and dynamic rewards system encourages employees to take more risks and ensure better project development, which minimizes redundancies and wastefulness (Kuratko et al., 2004). Rewards should be given whether an entrepreneurial venture succeeds and fails due to the inherent knowledge acquired.

There also needs to be "flexible organizational boundaries" that allow for free exchange between different organizational entities, where each business unit supports and compliments its predecessor (Kuratko et al., 2004). "Resource availability" is strategically important for corporate entrepreneurial activities to flourish. Management needs to be able and prepared to endorse project funding at the early stages and support the projects throughout their life cycles (Kuratko et al., 2004). Funding can be an instrument for success especially in dealing with the uncertain nature of entrepreneurial projects. Autonomy is important for sustainable entrepreneurship, by creating an open atmosphere for "work discretion/autonomy" is likely one of most critical elements that needs to exist (Kuratko et al., 2004). Without organizational autonomy, corporate entrepreneurs will unlikely be able to successfully create new ventures, create new business opportunities and think out of the box. If strict controls and decision making authority is exclusively kept within the company's top management, then that will be a barrier for corporate entrepreneurial activity to be successfully initiated. Therefore, corporate management must deliberately instill autonomous mid level managers and employees and allow them an acceptable level of autonomy in order to achieve a successful transition into a corporate entrepreneurial mindset (Kuratko et al., 2004).

Employee autonomy allows corporate entrepreneurship implementation to spread across the larger spectrum of the organization. It is therefore evident that "individual entrepreneurial behaviour" is fundamentally important for the creation of a sustainable corporate entrepreneurial culture in larger organizations (Kuratko et al., 2004). There needs to be a balance between the entrepreneurship model within the company and outside the company. Although a company environment creates a level of control for the entrepreneurial activities, the organization can also minimize the presence of this control through designing a leaner organizational structure.

There are resulting "outcomes" from moving through this model on an individual and organizational level. There needs to be a win-win situation resulting from the specific corporate entrepreneurial functions. The individual reward needs to be attractive enough to encourage as many entrepreneurially driven employees to create new business ventures from within the company. At the same level, attractiveness of pursuing entrepreneurial ventures needs to also be a priority for the company's top management. The rewards for the company need to be attractive enough in order for company management to become strongly inclined to support new business creation at a maintainable level (Kuratko et al., 2004). If both spectrums of employees and management are dedicated to create entrepreneurial initiatives, then they are creating a better environment for corporate entrepreneurship to succeed.

Developing and implementing a corporate strategy is a critical function for an organization's management. Therefore the "perceived entrepreneurial strategy-outcome relationship" emphasizes the perception that each part of the model has a connection to the other (Kuratko et al., 2004). The process is interconnected in a methodical manner. One element cannot succeed without the success of the previous element. A company's management needs to observe "increased sales", "profit", "and/or market share" in order to be able to sustain corporate entrepreneurial initiatives (Kuratko et al., 2004). Giving management a positive "*perception*" of success will leave it with no choice other than continue to provide the necessary support that corporate entrepreneurs need to systematically create new business ventures. In doing so, the probability of creating a sustainable corporate entrepreneurship culture across the organization increases significantly (Kuratko et al., 2004). It is important to understand that the entrepreneurial activities in this context are still within the corporate boundaries, therefore, sales, profits and marketing issues remain dominant for a company's success or failure.

The "perceived decision-outcome relationship" is an important part of the model because it allows the corporate entrepreneur to believe in the corporate entrepreneurship process within an organization (Kuratko et al., 2004). If employees in the organization believe that behaving entrepreneurially in a firm will yield generous outcomes for their careers, then the likelihood that these employees will be encouraged to pursue entrepreneurial activities will increase (Kuratko et al., 2004). Ultimately, these types of perceptions within the model create a sought after virtuous cycle of employees recognizing that if they pursue entrepreneurial initiatives then they will be rewarded by the company.

Framework Model Types and Applications

The creation of small entities or pockets of entrepreneurial activity within the company create the potential for new businesses to be created from within the organization. However, it is necessary that the corporate system as a whole be aligned for the successful implementation of a corporate entrepreneurship strategy and the utilization of the overall capabilities and resources inbuilt in the larger organization.

In their study of how organizational corporate entrepreneurship is achieved, Wolcott and Lippitz (2007) conducted a comprehensive analysis on corporate entrepreneurship approaches that companies can utilize to create successful new business ventures. As a result of their analysis they identified "four" overarching models for corporate entrepreneurship, the "Enabler", the "Advocate", the "Producer" and the "Opportunist" shown in Figure 19 (Wolcott & Lippitz, 2007) .

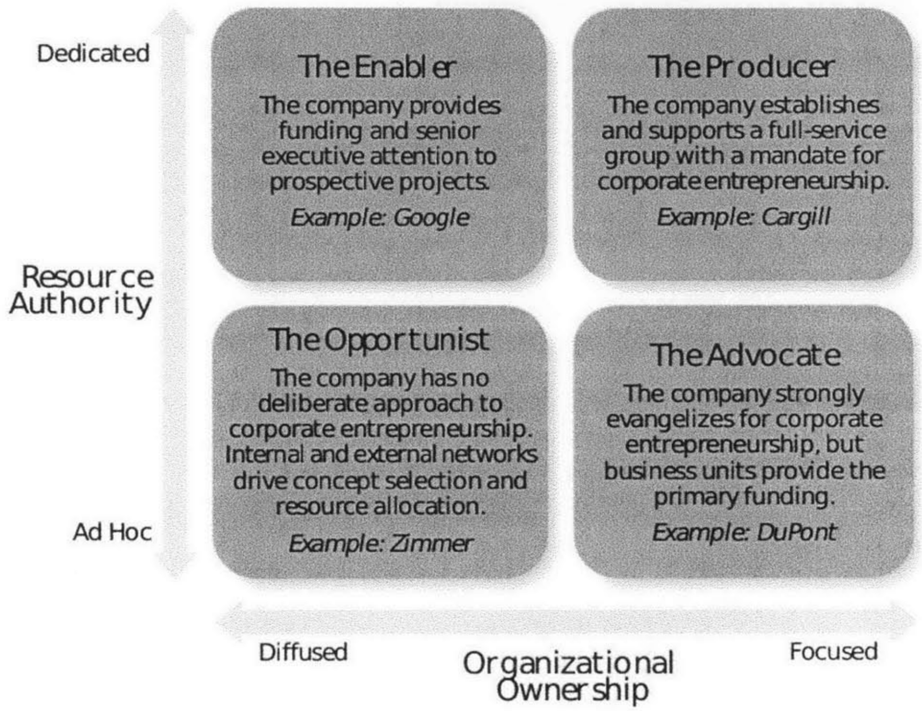

Figure 19: Four models of corporate entrepreneurship, adapted from Wolcott and Lippitz (2007)

The "Enabler": The Enabler model best exemplified by Google Inc. allows for entrepreneurial activities in the organization to occur through the creation of a robust management support system, along with the necessary organizational services that support the creation, evaluation and advancement of corporate entrepreneurial initiatives (Wolcott & Lippitz, 2007). Google's organizational design supports its employees to innovate beyond the regular business by allowing them to spend a small percentage of their time pursuing out of the box ideas (Jaruzelski & Dehoff, 2010).

The "Advocate": The Advocate model differs from the Enabler model in that organizational resources are not as abundant for the corporate entrepreneurs (Wolcott & Lippitz, 2007). The core of this model is giving each business enough autonomy to create a new business within its own boundaries, thus creating internal "advocates" for each new business idea (Wolcott & Lippitz, 2007). The limitation in resources forces each team to develop a better focus for the new business venture and also forces the team to optimize resource use. Wolcott and Lippitz (2007) highlight DuPont as an example for this type of model. Where DuPont created internally the "Market Driven Growth initiative" designed to create an ecosystem for new business creation within the company's varied business units (Wolcott & Lippitz, 2007).

The "Producer": The Producer model occurs when a separate corporate entity within the existing corporate boundary is created in order to facilitate the execution of special projects, hence enabling the company to create new business development initiatives. The model helps in the creation of entrepreneurial pockets within the larger organization. These pockets work within a structured organizational process that contains all the necessary support structures such as necessary organizational processes, stage gates and a quick project identification and elimination step when considering external business initiatives (Wolcott & Lippitz, 2007). Examples for this type of model is IBM's Emerging Business Opportunities (EBO) organizational process (Nunes, 2004) and Cargill Inc's "Emerging Business Accelerator" organizational process (Wolcott & Lippitz, 2007). Both organizational processes allow the company to explore new business areas from an innovation standpoint in a structured and systematic manner. Ensuring that the process taps into the capabilities of the different specialty units within the company (Wolcott & Lippitz, 2007).

The "Opportunist": This model relies on a relatively flexible and dynamic organizational approach. Companies allow a certain level of trial and error in order to achieve the creation of a new business. They achieve this by seeking the right opportunity at the right time through the right method (Wolcott & Lippitz, 2007). As the term suggests, it is the exploration of opportunities that allow new business ventures to be explored. Wolcott and

Lippitz (2007) discuss the example of Zimmer Holdings Inc., a medical device specialty company that created a new method for surgery that minimizes the harshness of surgical procedures. Employees within Zimmer Holdings Inc. were the driving force behind the successful implementation, where they found an opportunity to improve the business and implemented the change accordingly (Wolcott & Lippitz, 2007). Management of the company as well provided the needed support to explore the new surgical methods and therefore the full spectrum of personnel in the company were supportive of the entrepreneurial initiative.

Companies need to be able to react to the challenges that may face them when new entrepreneurial initiatives are introduced within the organization (Wolcott & Lippitz, 2007). One of the main challenges that could arise is the disruption of management's continued support. Management in a company can either be the leading factor for success or the leading factor for failure of a new project (Wolcott & Lippitz, 2007). To create better opportunities for success, the company needs to ensure that management is consistently supporting new business ventures.

Framework Model Structure

According to Covin and Slevin (1991), the key component necessary to create a successful entrepreneurial enviornment in the firm is fostering and promoting the entrepreneurial "*behavior*" (Covin & Slevin, 1991) across the company. The authors indicate that both the employees in a firm and the firm's management dictate the occurrence of this behavior which supports the creation of the necessary enviornment to foster entrepreneurship (Covin & Slevin, 1991). The firm and its employees have an interdependency on each other, where the succuess of the firm is strongly linked to the success of the individual corporate entrepreneur and vice versa (Covin & Slevin, 1991). Therefore, it is paramount that the existing working relationship between the employees in the context of the company need to be positive and healthy (Covin & Slevin, 1991).

Covin and Slevin (1991) discuss entrepreneurship in relation to the company itself. Outlining a framwork model that maps out the behavior interlinks between the company and its employees. The model describes the "Entrepreneurial Posture", "External Variables", "Strategic Variables", "Internal Variables" and how all of these model elements impact the overall "Firm Performance" (Covin & Slevin, 1991).

When a firm positions itself competitively against other firms to pursue entrepreneurial endeavours, it is forming what is referred to as an "Entrepreneurial Posture" (Covin & Slevin, 1991). The firm's leadership team is typically the prominent entity that manages the posturing in an organization. It has an important role in supporting the innovation process which is essential for a company to create new products and services and challenge the status quo (Covin & Slevin, 1991). This type of posturing provides the firm with the opportunity to reshape its entrepreneurial ecosystem, where the focus is on creating new value and positioning itself to compete with other companies and develop an industry advantage (Covin & Slevin, 1991).

The authors outline the impact of the surrounding enviornment on the success or failure of an entreprenurial project within the company, they refer to the surrounding enviornmental impact as "External Variables" (Covin & Slevin, 1991). These external factors could be the result of technolgical disruptions in the industry, socio-economic drivers, geopolitical drivers, policy changes by governments or industrial oversight boards (Covin & Slevin, 1991). The external factors create a new challenge for a firm that wants to foster a successful and sustainable entrepreneurial ecosystem (Covin & Slevin, 1991). The main issues with these types of factors is that they are in most cases unknown to the company and therefore more challenging to face. There are also barriers that may prevent the firm from behaving entrepreneurially, for example, if there is a product innovation legal battle such as what has been ongoing between Samsung Group and Apple through the years over smartphone patent infringements. These legal battles could slow or in some cases even halt entrepreneurial activities from becoming widespread in a company, especially if large financial penalties are feared (Barrett, Satariano, & Burrows, 2012).

Companies need to be able to deploy methods that allow them to be in a stronger position for success. As Porter (1987) describes, if managed appropriately, a corporate strategic approach provides the company with a competitive edge in any industry it chooses to operate in. This is achieved by following a systematic review and evaluation of the processes and capabilities needed to develop new products and create new services (Porter, 1987). The company is able to create a strategic advantage that places it in an advantageous position against any of its industry rivals (Porter, 1987). These important elements are what Covin and Slevin (1991) refer to as "Strategic Variables" (Covin & Slevin, 1991). In their assessment, they describe how a company's competitive strategy can be designed to optimize its entrepreneurial growth opportunities (Covin & Slevin, 1991). A company's management should deliberately link its corproate growth strategy with their its corporate entrepreneurial strategy.

The company needs to have a bullish approach from growing its business. If the firm strategically positions itself to grow i.e has growth oriented or what they refer to as the "*build-oriented*" strategic approach, then the firm will likely be more entreprenrurial than a firm with a less aggressive or what they call having a "*hold*" approach for growth (Covin & Slevin, 1991). The theory behind this is that if a firm has an aggressive business stance then it will experience successful business growth (Covin & Slevin, 1991).

Covin and Slevin (1991) describe the importance of "Internal Variables" for sustainable corporate entrepreneurial culutres, where to better understand these variables, a closer look at how they interact with each other and the firm itself is presented in Figure 20 (Covin & Slevin, 1991):

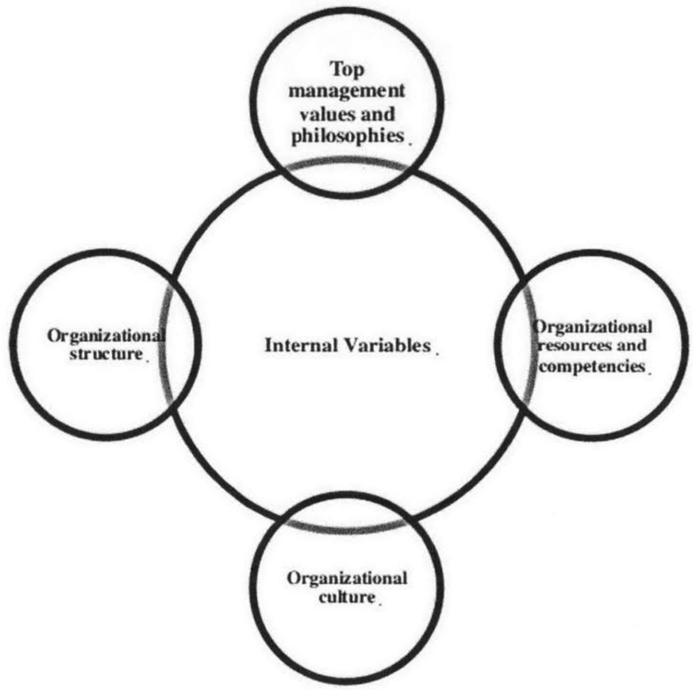

Figure 20: Internal variables impacting a firm's entrepreneurial behavior. Summarized and adapted from Covin & Slevin (1991)

To evaluate a firm's entrepereneurial behavior capacity, it is necessary for both employees and management to be the main assessors in determining how entrepreneurial a firm can become. Management's affinity to entreprenrial behaviors at the highest level of the firm will undoubtedly shape its entreprenruial capacity (Covin & Slevin, 1991). Possessing the necessary resources whether financial or technical will determine if the firm can become entrepreneurially oriented (Covin & Slevin, 1991). The reserouces described by the author cover the full organizational spectrum of financial, personnel, equipment, manufacturing capability and product design (Covin & Slevin, 1991). The more resources the firm posssesses, the more it is able to behave entrepreneurially on a larger scale, and the less resources the firm possesses, the less it will be able to behave entrepreneurially on a larger scale. (Covin & Slevin, 1991). Therefore, it is important that the company avails these resources and allows some leway in resource allocation in order to increase the potential of new business success.

As previously mentioned, the organization as a whole needs to have an affinity to corporate entrepreneurial behaviors in order for a strong "*entrepreneurial culture*" to form (Covin & Slevin, 1991). Management is the key internal stakeholder, where a firm's management is the responsible entity that helps create, foster and sustain the entrepreneurial behaviors throughout the entire company. Managers need to allow their employees to pursure entrepreneurial activities by supporting the envoirnment for this type of activity to prevail throughout the organization (Covin & Slevin, 1991).

Organizational structures as described by Covin and Slevin (1991) need to have the following characteristics in order for the firm to have the ability to behave entreprenerurially. The firm should have a decentralized project approval structure and a lean organizational structure that accept more flexibility in the decision making process. The communications between employees and management should be open and frequent and the firm should be organized to create synergies between the new product researching function, the business development function and the product manufacturing function (Covin & Slevin, 1991).

Some of the components create an associated dichotomy within "Firm Performance" (Covin & Slevin, 1991). Good performance is defined as the result of high growth and profitability (Covin & Slevin, 1991). There is also an outline of the link between the entrepreneurial behavior of the firm and how it reflects on the firm's performance. If a firm's performance is optimal, then that is likely a result of its ability to behave entrepreneurially. However, if the firm's performance is not optimal, then the likely reason for this lack of performance is due to the decrease in entrepreneurial behaviors at the firm level (Covin & Slevin, 1991). It may seem like the authors had a dualistic view, however, in comparative terms, the prevalent entreprenuerial behavior in a company is a strong indicator for growth (Kuratko et al., 1990).

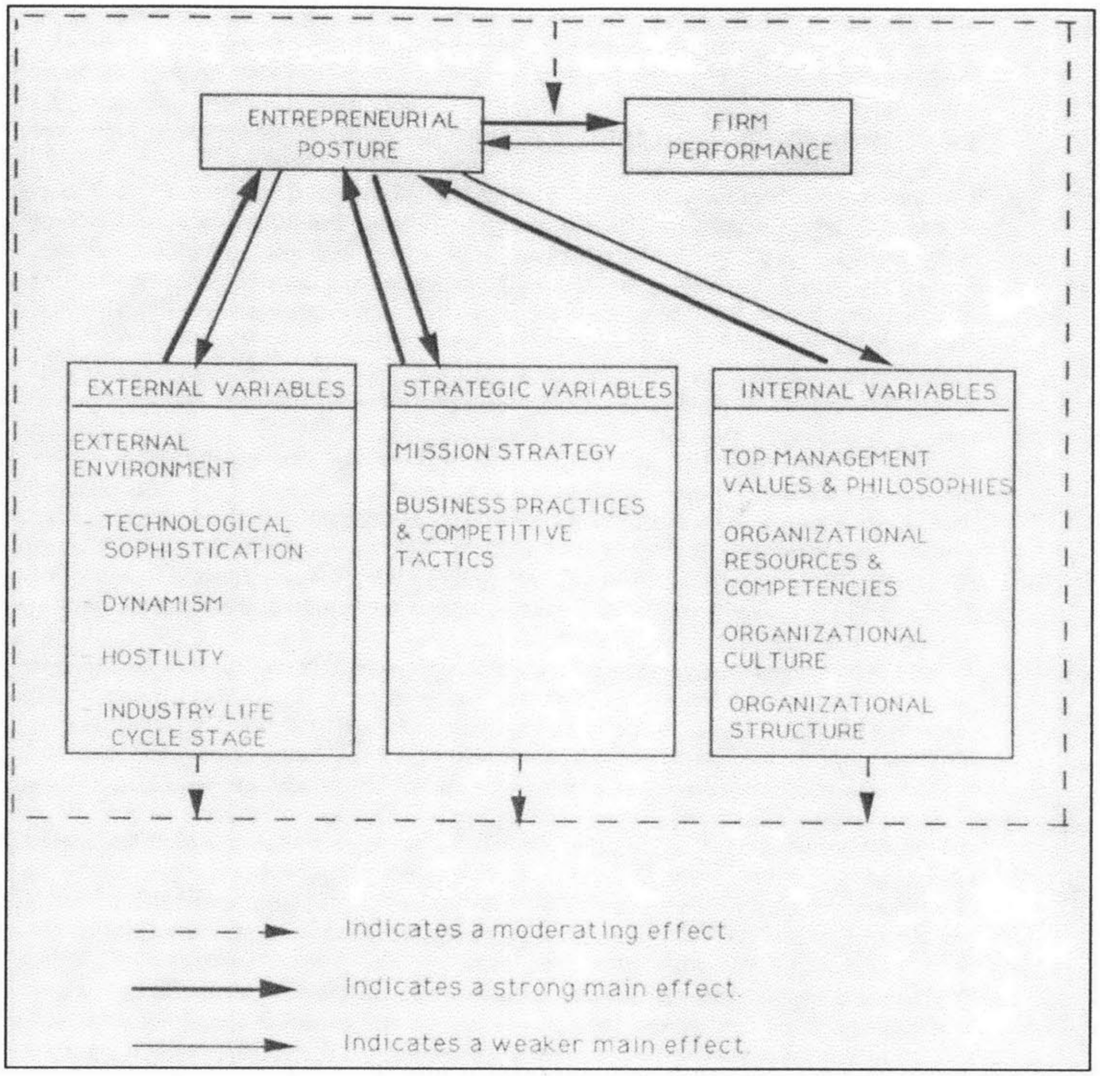

Figure 21: Corporate entrepreneurial model. Adapted from Covin and Slevin (1991)

Every company encounters different business challenges, and when these challenges arise, it is up to the company to evaluate its business and determine which corporate entrepreneurship method works best within its existing structure to mitigate any potential negative impacts associated from these challenges and instead create value for the firm (Parboteeah, 2000). The model in Figure 21 developed by Covin and Slevin (1990), is an instrumental tool to help in analyzing corporate entrepreneurial behaviors through a systems thinking lens. The interconnectivity that occurs between the varying elements is a confirmation that corporate entrepreneurship cannot occur outside the business system.

Chapter 7: Company Case Analysis

DuPont – A Stage Gate Process Approach

A prime company example for utilizing a dynamic approach for creating and supporting new business development initiatives is what DuPont has been doing for many years. DuPont is a billion dollar company that has been in operation for more than two hundred years and manages activities in several countries across several continents producing a diverse group of products across a multitude of industries such as agriculture, automotive, chemicals, energy, marine and safety (E. I. du Pont de Nemours and Company, 2013). From 1802 and beyond, DuPont has adopted a new business ideation process that allows it to identify existing business synergies and create new business opportunities. This ideation process has allowed a constant flow of new growth opportunities to be created over its history.

The process that DuPont adopts relies heavily on utilizing its complementary strengths that support new product and service creation. This is an obvious competitive strength that DuPont possesses since it has a very good competency and capability awareness gage. Moreover, it is able to deliberately and consistently identify cross industry linkages by reviewing its existing internal organizational competencies and matching them with synergistic partners (Bhardwaj, Camillus, & Hounshell, 2006). This process helps DuPont consolidate its competency portfolio and fill technical and business gaps where the opportunity is available. The deliberate process has proven successful for DuPont over the years, it is reflected with the offering of diverse products and services across seemingly very different industries.

Bhardwaj, Camillus, & Hounshell (2006) consolidate the process that DuPont utilizes to generate new business opportunities in Table 8 (Bhardwaj et al., 2006). This "continuous search" process has generated successful results for DuPont and helped the company in the identification of new business opportunities (Bhardwaj et al., 2006). It allows DuPont to consistently explore the viability of producing new products to serve different industries. The only fixed factor in this process is that DuPont has a very high self-awareness of its capabilities which is as mentioned before a key business strength that gives it a great competitive advantage.

Search domain	Reasons for domain choice
Explosives (1802-1921 and later)	Profitable market opportunity discovered by founder in 1802 for better quality and cheaper black powder; founder's research expertise in explosives
Biomanufacturing (1903-1916)	Anticipated shortage of glycerin, an important explosives ingredient, available only as a by-product of tallow candle manufacture, laundry soap production, and slaughterhouse waste. Novel synthetic production method needed. Wine and beer distillation known to yield minute amounts of glycerin as a by-product. Conducted fundamental research on bacteriological fermentation to raise yield.
Nitrogenous compounds (1904-1921 and later)	Anticipated shortage of nitrate of soda used to make nitric acid for explosives manufacture; Chilean mines were sole global source; inventing an industrial nitrogen fixation method would yield from the atmosphere an inexhaustible supply of nitrogen that could be used to make nitric acid and other nitrogenous compounds.
Nitrocellulose (1908-1921 and later)	U.S. government filed and antitrust lawsuit in 1907. In 1908, the government canceled large orders of smokeless powder from DuPont, started construction of its own plants, and Congress passed a bill preventing the Navy's explosives purchases from monopoly. Utilize idle plant capacity by finding new uses for nitrocellulose, which was manufactured as an intermediate step in the production of smokeless powder.
Synthetic organic chemicals (1915-1921 and later)	Imports of organic chemicals from Germany ceased during WWI; severe shortages, sky-high prices; some organic chemicals used in explosives manufacture also used in other industries; potential for public and political backlash. Find uses for anticipated massive idle plant capacity after war; utilization of "organization"; avert postwar layoffs; new businesses that would pave entry into other later.
Inorganic chemicals (1916-1918)	Complement ongoing work on photographic and pharmaceutical organic chemicals, and paints and varnishes.
Vegetable oils (1916-1918)	Utilize anticipated postwar excess capacity; many uses of vegetable oils in other industries – "nucleus" industry as a gateway to others later; "nonorganized" in manufacturing and commercial terms, but high growth and profit potential.
Varnishes and paints (1916-1921 and later	Utilize postwar excess capacity; skills and equipment required are simple in "general" paints and varnishes; processes, equipment, and raw materials similar to those of pyroxylin solutions already being produced; market complement to pyroxylin solutions.
Paper (1916-1919)	Utilize cotton purification plant used in explosives manufacture; war shortages of cotton rags in paper trade; DuPont could produce purified cotton fiber or cotton pulp that paper manufacturers could use as substitute for cotton rags.
Motor cars (1917-1921 and later)	Need to invest large war profits. DuPont's treasurer and Pierre S. du Pont, who had both been personally investing in GM, were instrumental in DuPont's buying shares in GM and Chevrolet. Young auto industry profitable promised strong growth. DuPont's artificial leather, paints and varnishes, celluloid plastic, and rubber-coated fabrics could be sold to GM. DuPont's large engineering department could construct auto plants for GM and others in the growing industry to avert postwar layoffs.

Table 8: DuPont's continuous search for new business areas to explore development opportunities starting from 1802 and beyond. Adapted and developed from Bhardwaj, Camillus, & Hounshell (2006)

Throughout DuPont's history there has been several examples where the company enters into a new business area through the persistent identification of business synergies within its existing internal capabilities and external partners. An example to highlight is DuPont's entry into the ethical drugs business through its strong competency in the business of developing synthetic organic chemicals (Bhardwaj et al., 2006). Another relevant example is DuPont's use of Teflon, which is a heat insulation product used in the development of heat transfer products. In order to further explore the use of Teflon, a new business project team was created to take the idea to a larger and more commercial scale (Peterson, 1967).

This process is a strategic approach that DuPont has utilized across its history to be able to self-asses and therefore self-discover new business opportunities through its existing competencies. Moreover, in DuPont's case, one of its most critical corporate competencies is its scientific prowess in diverse fields. This gives DuPont a unique advantage in positioning itself to impact diverse business sectors across multiple industries. It ultimately allows DuPont to continuously create new products and services (E. I. du Pont de Nemours and Company, 2013). However, in Roberts and Berry's (1985) formative research work they conclude that for a company to be able to create a positive return on its investment, the company needs to adopt a diverse new business development approach to create new ventures. A company such as DuPont needs to be able to deploy diverse new business development approaches that will ultimately transform into long term value adding businesses for the company (Roberts & Berry, 1985).

For a company like DuPont to be able to continuously grow and create new business opportunities in a consistent fashion across diverse industries it employs a process that has evolved internally called the "*Business Initiative Process*" (BIP) (Karol et al., 2002). The BIP is a tool that systematically ensures optimal outcomes from new business development activities pursued by DuPont's different business units (Karol et al., 2002). Karol, Loeser and Tait (2002) discuss the process and describe how it helped DuPont consistently produce new products and services serving its large and diverse customer base.

To ensure that the pipeline of new business ideas is continuously flowing with high quality initiatives, DuPont follows a structured approach. Karol, Loeser and Tait (2002) describe the BIP as a well defined stage-gate process (Karol et al., 2002). The stage-gate structure provides DuPont with a better way to manage the new business ideas since it allows it to manage each step of the process and determine whether or not a go or no go decision is to be made. Similar to DuPont's approach, other companies have also adopted comparable approaches such as the Dutch specialty chemicals company Nederlandse Staatsmijnen or Dutch State Mines (DSM), where all the major stakeholders involved in the development of a new innovative research project utilize a systematic review and evaluation cycle in order to determine if resources should continue to be allocated or stopped (Vanhaverbeke & Peeters, 2005). Therefore, mirroring this type of approach in cases of other companies can generate similar results such as what was experienced in DuPont. However, the level of detail and due diligence that DuPont practices merits a closer observation of how it executes its business development process.

As mentioned previously, in order to optimize the return on its investment in new initiatives, DuPont created the BIP process to systematically and consistently produce positive results (Karol et al., 2002). One of the unique features is its stage-gate approach that helps to monitor each stage of the process and identify the set of activities that need to be completed at each step. The process is designed to move from one stage of the process to the next stage only if the specific step at the current stage is complete (Karol et al., 2002). The stage gate approach is important to the process because it ensures a comprehensive activity completion log at each stage.

The BIP is designed to work through five distinct phases. Each phase goes through a checkpoint that is a required process element to be completed (Karol et al., 2002):

1. "Business case"
2. "Evaluation and planning"
3. "Detailed development and preliminary negotiations"
4. "Scale-up and definitive agreements"
5. "Implementation and commercialization"

The key attribute for the success of this process is providing DuPont with the ability to compartmentalize each step. Figure 22 shows the relationship between the different steps in relation to the project's time frame. Each step has a specific function that contributes to moving the new business project forward. The goal is to optimize each activity by availing the necessary resources dedicated to completing each step in order to achieve a successful outcome until the next stage is ready to progress. The process is also designed to eliminate weaker projects quickly, especially if a specific phase cannot be reached in an optimal way (Karol et al., 2002).

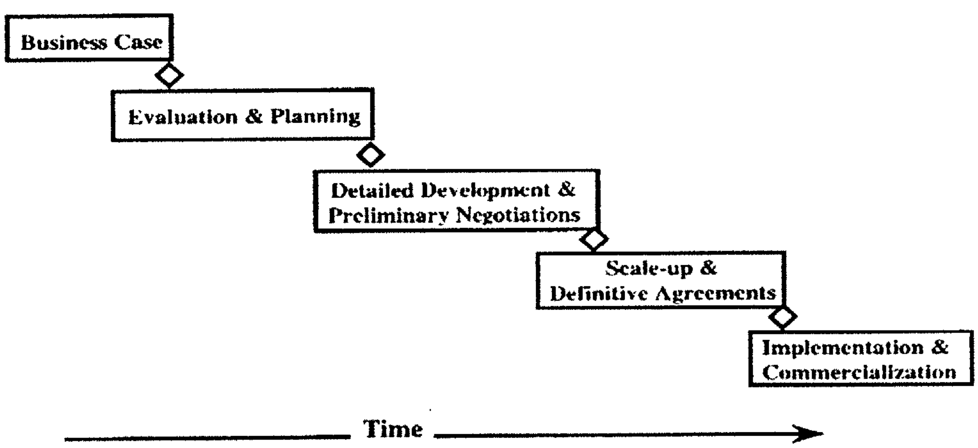

Figure 22: The DuPont BIP process five step stage-gate phases. Adapted from Karol, Loeser, & Tait (2002)

In order for DuPont's BIP to succeed, the process is structured around five key functions that help manage the overall operation of the process, Figure 23 shows these functional process elements (Karol et al., 2002):

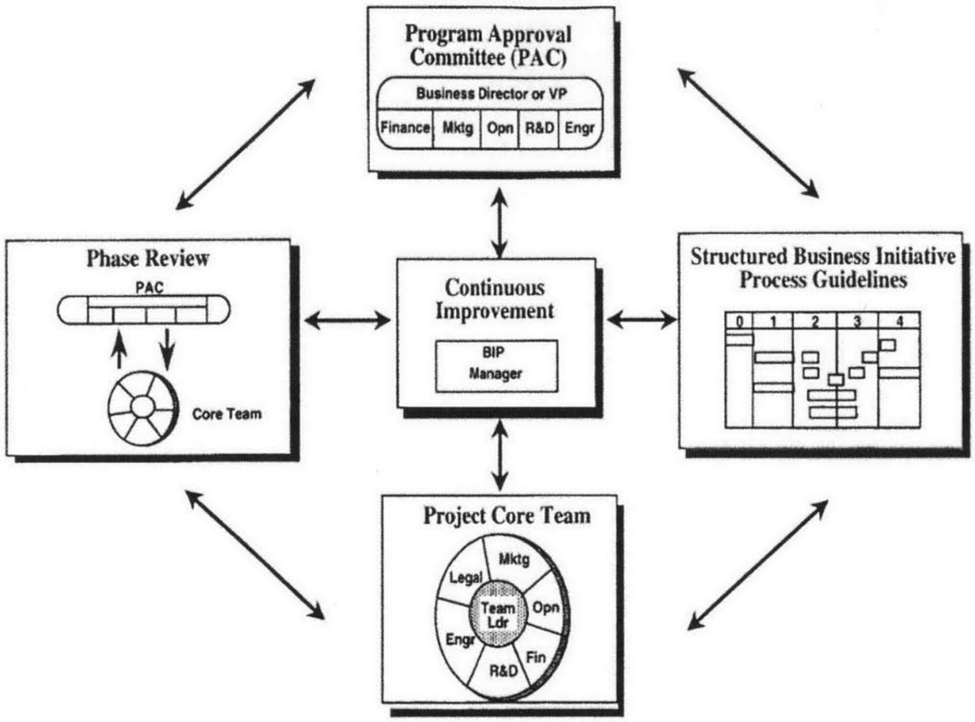

Figure 23: DuPont BIP process, five functions for new business development. Adapted from Karol, Loeser, & Tait (2002)

"Program Approval Committee (PAC)": This committee serves the function of overall support and oversight of all the business related issues for the new venture. The PAC ensures that the new business venture is progressing well and is provided with the necessary resources be it technical, legal or financial. It is comprised of management personnel that represent different stakeholders directly or indirectly related to the development of the new business venture (Karol et al., 2002). Although approval committees create an additional internal layer within the organization, in DuPont's case, this committee is efficient and tasked to turnaround feedback relatively quickly.

"Core Team": This team is similar to a "start-up" team. Which is a small group of individuals, and in DuPont's case typically does not exceed ten individuals (Karol et al., 2002). The team members represent different functional business units across different parts of the organization. The team formation is fluid and is designed to happen at the beginning of the new venture, where it is instrumental that the team realizes the project from its early stages of development to its final stages (Karol et al., 2002).

"Structured Business Initiative Process Guideline Manual": The manual developed by DuPont is strategically important as it provides the main guidelines for the "*core team*" to advance the project forward through what Karol, Loeser, & Tait (2002) outline as the "*nine venture workstreams*" (Karol et al., 2002). These nine elements dictate what the venture core team needs to manage in order to create a successful new business venture. The workstreams are designed to encompass all the necessary critical elements such as marketing, product and process development, staffing, facility design and financial issues Figure 24 shows a summary of these workstreams (Karol et al., 2002).

Key Workstreams that the Development Core Team Must Effectively Plan and Execute.

1. Market planning and market development --- building the interface with the marketplace.
2. Establishing the product/process technology base.
3. Developing the full range of operational business processes.
    - Ensure focus on manufacturing and complete supply chain.
    - Develop/install the complete supporting business process infrastructure.
4. Building facilities and designing/installing equipment.
5. Staffing for development and continuing operation.
6. Establishing/building the relationship with your partner(s).
7. Obtaining the "consent to operate" --- i.e., the approval workstream.
    - Internal, regulatory, host country, local government, community, etc.
8. Resolving legal entity issues.
9. Financing.

Figure 24: The DuPont BIP guideline nine venture workstreams. Adapted from Karol, Loeser, & Tait (2002)

One of DuPont's key strategic advantages in creating new business development opportunities is its capability to find synergistic opportunities with partnering companies. Therefore, it was important for the BIP to include a "*JV/Alliance Toolkit*" (Karol et al., 2002). The toolkit is designed to provide the needed resources to help the core team with developing a joint venture or help the core team identify a strategic alliance partner such as a company that operates in complimentary areas to DuPont's existing business (Karol et al., 2002). Toolkits are helpful because they provide a methodical process to create the joint venture or the alliance. DuPont is able to utilize the lessons learned from previous joint venture arrangements to create new agreements.

The resources that are part of the toolkit are the "DuPont joint venture seminar", which provides both the DuPont senior level management and the new venture core team's management with the necessary knowledge for establishing strategic alliances and joint venture opportunities (Karol et al., 2002). "Partner evaluation and selection frameworks", provide the team with a list of the necessary items that need to be fulfilled to secure a positive alliance relationship (Karol et al., 2002). "Negotiation team guidelines", and the "Transition planning/implementation processes" (Karol et al., 2002), outline the negotiation plan for the core team and how to structure the deals with the potential new partners. It also explains how to move forward with adding a new partner to the existing business. Finally the "Due diligince checklist" which ensures that the team is following its alliance guidelines outlined by DuPont's management to make sure the relationship being established between the parties is optimal for both (Karol et al., 2002).

"Phase Reviews": The reviews are a critical component of the process. They allow the management team and the venture team an opportunity to review the progress of the new business venture. The importance is in that at this juncture, both the management and the team involved in developing the new business opportunity have the choice to move forward to the next phase or stop the business development activities (Karol et al., 2002). This is a type of check that is necessary when adopting a systematic stage approach for new business development such as what is seen in DuPont's BIP. It gives the stakeholders an opportunity to take a step back and evaluate the progress reached thus far and provide all involved stakeholders the opportunity to address any issues and determine if the progress merits moving forward to the next stage or not (Karol et al., 2002).

"Business Initiative Process Manager": The function of the manager is to ensure that the BIP is moving forward and progressing as per the outlined stages. The manager gives the needed support to all team functions (Karol et al., 2002). The progression from phase to phase in the BIP is the most critical aspect of the process. It allows for a controlled transition along the project's activity plan, from one process function to the next. It is evident that for DuPont, following the step approach is imperative to sustainably generate consistent new business opportunities.

IBM – Emerging Business Opportunities (EBO) Organizational Process Framework

International Business Machines Corp., better known to the world as IBM, has been around for more than 100 years. It is one of the leading information technology companies in the world that creates innovative products and services ranging from software to hardware systems, to data storage to business application services (IBM, 2013).

Nunes (2004) describes IBM's unique approach in creating, managing and sustaining new business development opportunities with an innovation focus through its "emerging business opportunities" (EBO) organizational process. Established for projects that have a lifespan of two to three years with the mandate to " improve the company's ability to explore, develop and test emerging business opportunities to grow our business" (Nunes, 2004). This in turn helps IBM in the identification of high potential research projects that are being explored and experimented within IBM's research centers (Nunes, 2004). The goal in this case is to develop the ability to convert new research projects into new products that transform into viable commercial new business opportunities for IBM (Nunes, 2004). However, in order for a large company to create new businesses and become entrepreneurially driven, the entrepreneurial ecosystem needs to exist to enable new venturing activities to thrive. In the EBO process, IBM attempts to create the necessary ecosystem though identifying existing synergies between the research and development groups in the company with the relevant new business venturing opportunities at the corporate level (Nunes, 2004). The EBO at IBM serves as a venture nurturing entity that provides the necessary support for IBM to move the new technological opportunities forward or cancel them if they do not have high viability (Nunes, 2004).

Nunes (2004) confirms what was observed by previous research work, and attempts to describe the specific elements of the EBO process. At the firm level, the EBO plays a key role in "Introducing new business models", where the creative aspect in this case is in changing the regular business model of the company's daily operation and transforming it into another newer and more innovative business model for its day-to-day business. This concept outlined by Nunes (2004) is similar to Sawhney, Wolcott and Arroniz's (2006) "*business innovation*" concept (Sawhney et al., 2006). Where it is instrumental for the company to understand its own business and develop the ability to renew its practices to maintain a competitive edge.

Customers are the most important driver for a company's productivity. Therefore, developing "new customer sets" allows IBM to identify, either demographically or geographically, new market segments to enter into in order to create new business opportunities (Nunes, 2004). Moreover, if the company is conscientious enough in the identification process, then it will likely be more successful at identifying new customers to develop and market products for. The ability to identify new customers in an integrated way with the business is imperative for any company's survival and growth. It is especially relevant in the IT industry where IBM is focused the most, since the customer sets could have diverse representations by commercial, industrial or personal users.

The continuous introduction of "new offerings" as part of IBM's portfolio of products and services gives IBM a more entrepreneurial stance (Nunes, 2004). The creation of new products and services maintains the innovative cycle across the organization. It allows the company to direct resources to new innovations that allow it to add new offerings to its existing portfolio. IBM also focuses some of its resources on creating "disruptive technologies" (Nunes, 2004). It is another way which involves targeting leading technologically advanced incumbents and disrupting their business through creating competitive technologies, products and services that are competitive enough to create a disruption for the incumbent's business. By doing this, IBM increases its ability to create new and successful business opportunities.

In order to better manage the new business process, IBM's EBO created a unique classification method known as the "Horizon" classification (McQueeney, 2003). IBM categorizes each horizon level based on its business and research and development progress status. The classifications of the horizon levels are summarized in Table 9 (McQueeney, 2003).

Category	Classification
Horizon 1 (H1)	**"Businesses are mature, and managed with a sharp eye on current period revenue and profit. They tend to have a lower level of uncertainty, offer solid but modest growth, and have well-documented and easily measured customer value."**
Horizon 2 (H2)	**"Has a longer time frame and is more uncertain. H2 involves growth into new technologies for the company's current customers, or growth of current technology to new customer segments."**
Horizon 3 (H3)	**"Involves significant experimentation and is aimed at long-term growth. The kind of people attracted to H3 are champions and visionaries – unconventional thinkers who believe in their project and commit to pursue it because their instincts are telling them that it's right, even if they cannot always prove it."**

Table 9: Description of the "Horizon" classification used by IBM to categorize new businesses. Extracted and developed from McQueeney (2003)

The three-classification system described by McQueeney (2003) and shown in Figure 25 depends on the research group's activities and progress at each level of the horizon phase. In H1, the team works with businesses that are at an advanced level, the research and technological developments at this level cater to a more short-term business approach since there is significant progress already achieved (McQueeney, 2003). Sequentially in H2 the level of the business to be explored is in the mid-tier, where it is not as advanced and developed as H1 and not as early stage and embryonic as H3 (McQueeney, 2003).

In H3, there is n drastic increase in the ambiguouty of the business. The approach is not as clear as it in H1 or H2. In fact, the best approach to manage business projects at this phase is through allowing more freedom and flexibility for the project team working on the new project. By doing this, the business team develops the opporutnity to work independentaly on breakthrough research projects which have a very high level of uncertainty and associated risk, however, due to the research project's ambiguous nature, if successful then the team is able to produce higher growth potential opportunities for IBM (McQueeney, 2003).

Based on the concept that higher risk generates higher return, it can be concluded that the preferred horizon for IBM's EBO to work on would be projects that fall under the H3 phase. Since the nature of the research and technology activities revolves around very long-term and ambiguous project goals, the likelihood to produce higher growth rates and create higher rates of returns makes this phase more attractive for IBM since it has a high level capacity for entrepreneurial activity (McQueeney, 2003). Although, one can argue that focusing on the much more stable and known businesses in the H1 and H2, it may provide a better opportunity for successful project identification since the risk is more controlled and the level of uncertainty is manageable.

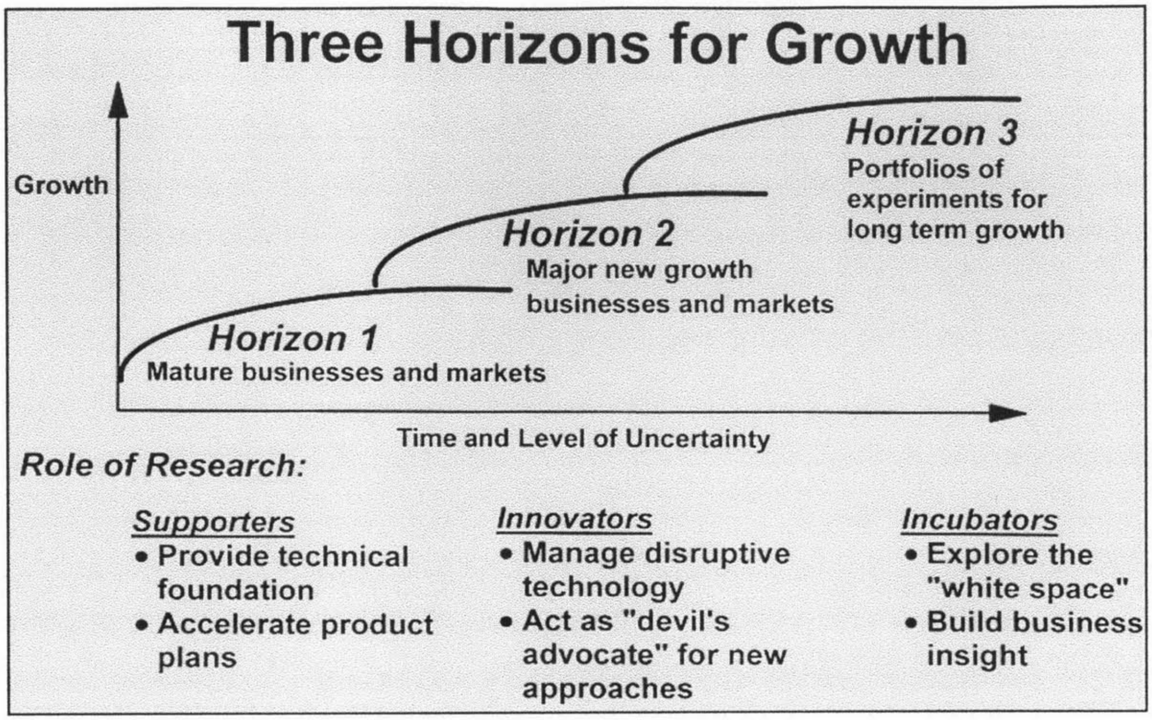

Figure 25: Three Horizons for Growth diagram. Shows the role of the research organization within each Horizon. Adapted from McQueeney (2003)

Once it is determined that the research team will require the support of the EBO, which typically occurs after the H3 business opportunity phase, a link is made between the research organization and the emerging business organization to create a Research EBO team (Nunes, 2004). The responsibilities are segmented between two complementary entities, the first is with the research group, which continues moving the project forward and maintains its work activity on all of the technical aspects concerning the research project. The second is the business focused EBO team, which handles all the business related issues ranging from developing the business case, marketing the products and addressing any supplementary financial issues that may arise (Nunes, 2004).

Nunes (2004) describes four distinct approaches that support organizational growth at IBM shown in Figure 26 (Nunes, 2004). The design of EBO's four way approach is to ensure that the company's growth targets are achieved through a diverse yet focused business development approach (Nunes, 2004). The benefit of having an approach such as this allows IBM the flexibility to modify its new venturing strategies. As described, the diversity of new business approaches helps IBM focus on the projects that have the potential to generate the highest value with the most optimal resource allocation scheme. It also allows IBM to shift its focus whenever a new opportunity is created. Having an ability to shift the business focus depending on available resources, market conditions and growth potentials gives IBM strategic flexibility, which in turn increase its competitive advantage.

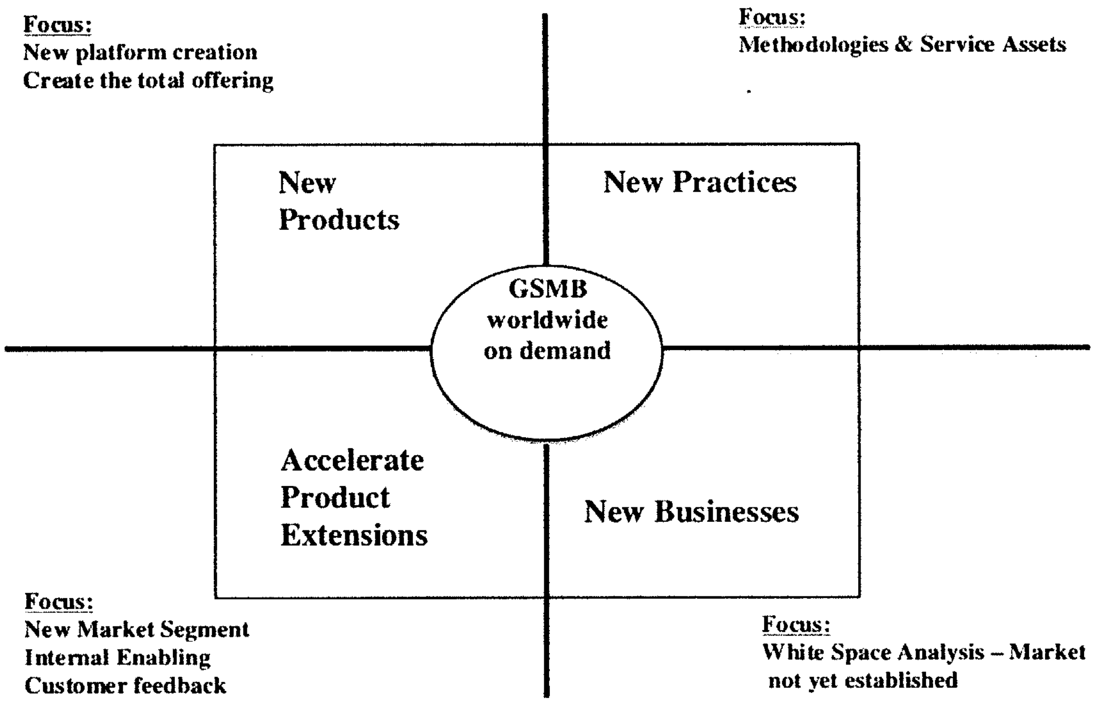

Figure 26: IBM's EBO four approaches for growth. Adapted from Nunes (2004)

Similar to DuPont's BIP process (Karol et al., 2002), IBM's EBO process also follows a systematic approach to progress a project forward, the process flow diagram is shown in Figure 27 (Nunes, 2004). The process begins with a "QuikScan" step, which is imperative since it is considered to be the first barrier that needs to be passed for the project to move forward to the next step. It quickly helps to determine if the project being evaluated will have a high potential for success or failure (Nunes, 2004).

Following the QuikScan is the "Investigation" and "Validation/Incubation" process steps, which allow the team to undergo a technology piloting mechanism or a business viability piloting mechanism (Nunes, 2004). The uniqueness of this stage of the system is that both its technical and business viability is tested simultaneously. It allows the team to have a better view of the potential for success from a technology viability standpoint along with a business viability standpoint (Nunes, 2004).

Upon completing the technical and business assessments of the project, the process follows a project review, which after successfully meeting the requirements, a preliminary team is formed to manage the project (Nunes, 2004). The team also manages both the technical and business aspects of the project and both are supported by their independent management teams (Nunes, 2004). At this stage and following the investigation and validation steps, the project development phase is almost complete and ready to move to the final phase, which is either to "Transfer" the project to an appropriate IBM division, or move it to the Business EBO or spin it out outside of IBM (Nunes, 2004).

From the process flow diagram in Figure 27, it is clear that the level of involvement of the EBO diminishes when moving across the project's lifecycle (Nunes, 2004). In the initial phases the EBO is heavily involved in the nurturing and development of the project and also the EBO supports the team development and provides initial funding. After which the EBO's involvement stops at the transfer stage. Therefore, the theme that is consistently derived from this process approach is incubation and nurturing of the business until it is able to progress independently.

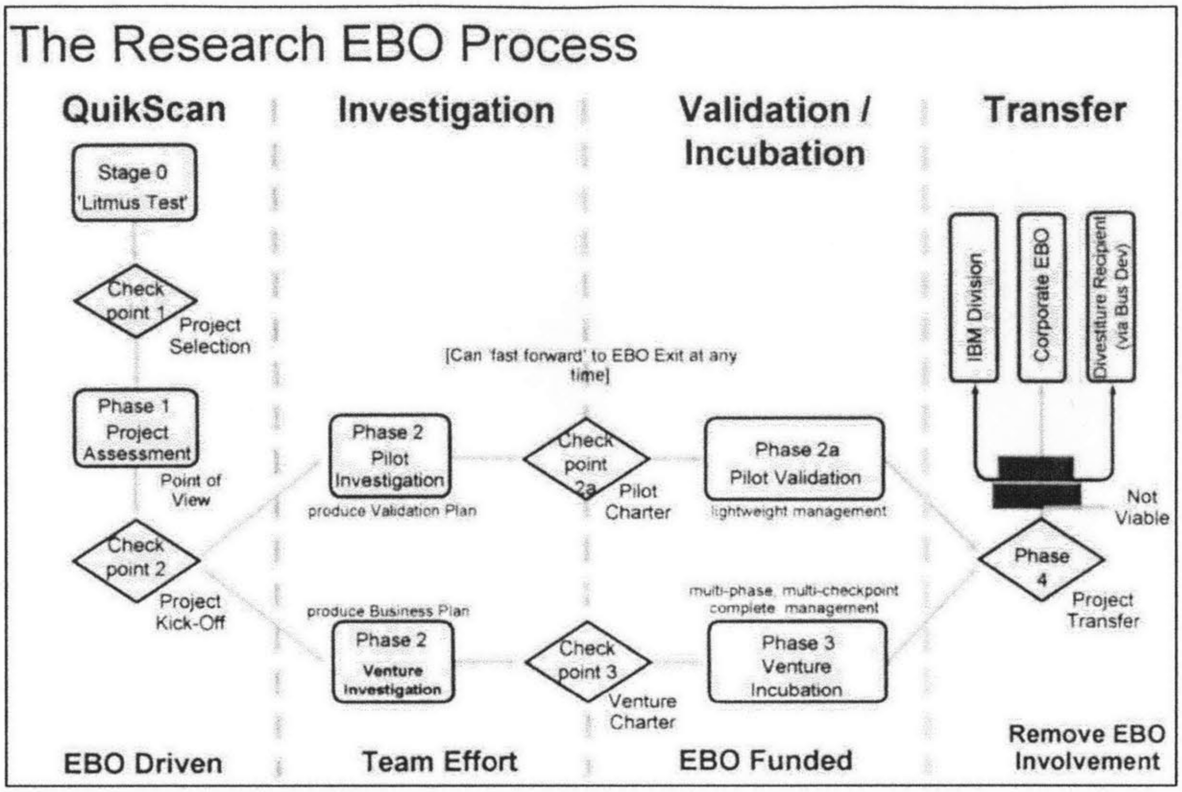

Figure 27: The Research EBO Process by IBM displays a systematic approach to scanning, investigating, validating and transferring technology projects in a step phase approach. Adapted from Nunes (2004)

3M – Consistent Approach to New Business Development

The Minnesota Mining and Manufacturing Company better known to the world today as 3M is a company that exemplifies continuous innovation and transformation. 3M throughout its history has been a role model for creating sustainable new businesses through diversified products and services (Roberts, 1980). A company like 3M cannot go unnoticed when analyzing new business frameworks. Roberts (1980) provides an empirical analysis of 3M's internal venturing approach. He evaluates the fundamental elements that allow 3M to achieve sustainable generation of new businesses through applying unique new venturing approaches (Roberts, 1980).

One of 3M's premier products is the "Post-it Notes", Sathe (2003) outlines 3M's new business development approach by specifically creating and developing new products (Sathe, 2003). 3M created this new product through identifying its existing capabilities in the adhesive tape technology and by undergoing an iterative and open innovation process discovered a new use for the product and hence a new user base to market the product to which was mainly in the office supplies category (Sathe, 2003). As Figure 28 shows, 3M's understanding to new business development is categorized into what currently exists in its operations and what is missing from it. The approach is to internally review its existing capabilities in order to identify specific strengths and in turn help it to pursue new product creation and enter into new markets (Sathe, 2003).

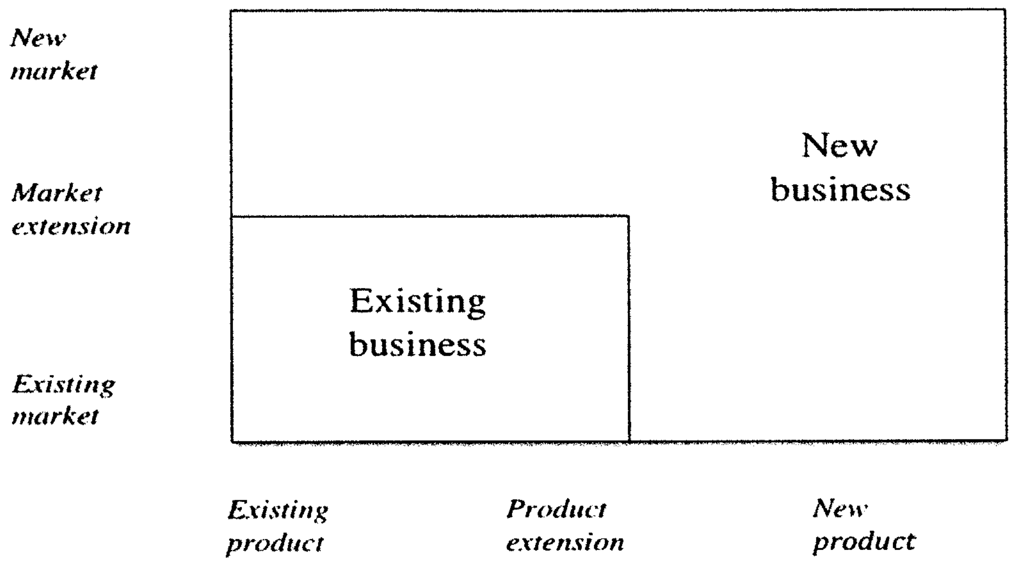

Figure 28: What is new business? Adapted from Sathe (2003)

3M's new business development management structure as shown in Figure 29 organizes itself around innovation from the top levels of the organization to the mid-level all the way to the front line employees. Due to the diversity of its product lines and service offerings, the way the new business development organization is structured allows it to increase the rate of developing new products and successfully commercializing them when they become technically mature (Roberts, 1980).

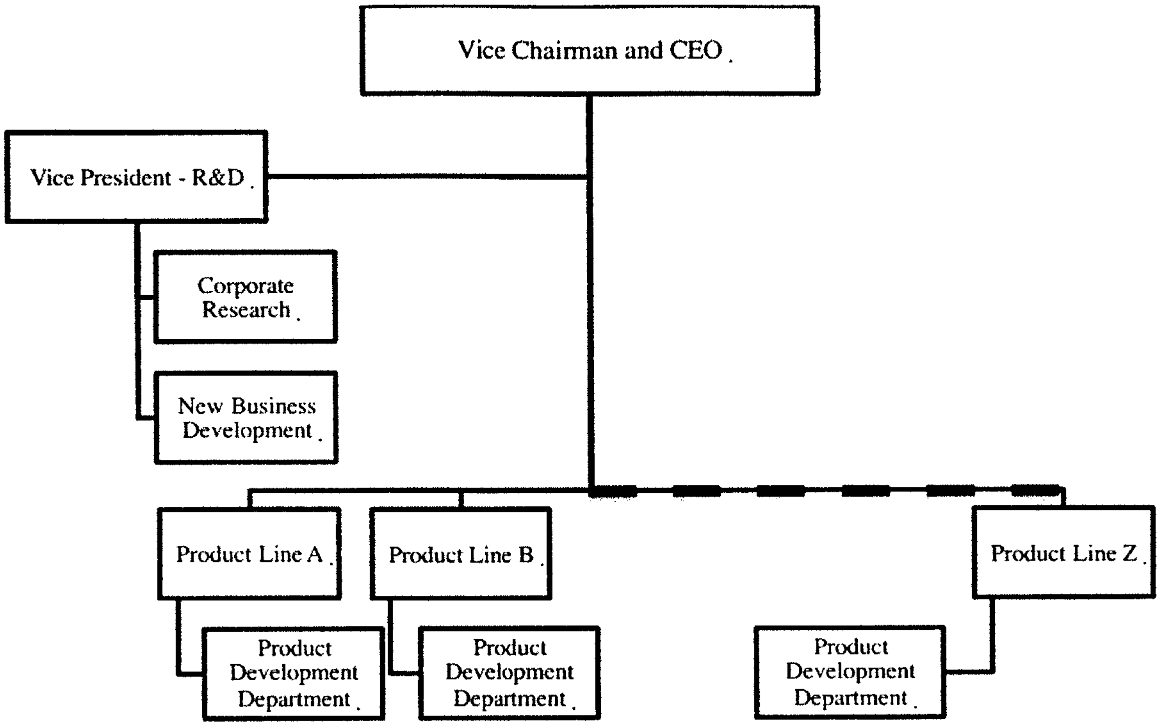

Figure 29: 3M structure for new ventures. Adapted from Roberts (1980)

By creating a "New Business Development Division", 3M is able to create a focused internal organizational body that is responsible to manage the evaluation, review stages and progress of new projects (Roberts, 1980). These new business projects are nurtured within 3M's new business incubation units and once they achieve an acceptable project maturity level they are deemed ready to either be incorporated within the larger company or carved out into a separate stand alone business which in 3M's case could be as simple as a specialized office supply product (Roberts, 1980).

In terms of new product creation, 3M is able to continuously produce highly technological and advanced products due to its unique nature of its new business development management approach and structure. The ability to create synergistic relationships between the product development organization and the new business development organization is instrumental in creating new business opportunities. In 3M's case, as mentioned previously, a new product is potentially a new business as well. Therefore, 3M's commitment to applying a methodical process approach to create new products is heavily dependent upon its technical prowess, which results in giving it a competitive advantage over its competitors. At 3M, a small autonomous team comprised of three or four employees is ultimately responsible for the new project's success (Peterson, 1967). The team responsible for developing the new product works in cohesion with the team responsible for creating the new business. The challenge that is created is the potential risk of product cannibalization through the addition of a competitive product (Roberts, 1980). However, Roberts (1980) addresses this concern by highlighting that this phenomenon in fact creates a strong competitive atmosphere at 3M. Because the same pool of resources is required from all organizations involved in the process so in order to create new competitive products, teams need to compete to get the best available resources (Roberts, 1980).

The importance of management's support and having quick approval processes is critical in 3M's new venture structure. Roberts (1980) emphasizes this by highlighting 3M's management mantra related to product development which is "Thou shalt not kill a new product idea" a belief that is common at the highest management levels (Roberts, 1980). The consequence of having such a belief and understanding at such a high level is a key driver for successfully creating new products consistently. Furthermore, employees at 3M feed off of this management belief and in return become more aggressive in launching new entrepreneurial initiatives within 3M. The safe and supportive environment that is created for the employees is one of the most important factors that help to promote continuous new product innovation. New ventures are therefore sustainably created and a corporate entrepreneurship culture that promotes new innovations prevails at 3M (Roberts, 1980).

Being flexible and dynamic is an imperative corporate attribute that has proven significantly important throughout 3M's history. This attribute gives 3M the opportunity to support entrepreneurially behaving employees and their direct management (Roberts, 1980). If an employee develops a new product that is not supported by his or her immediate manager, then the employee is allowed to move the idea to another organization that could find the new product idea more applicable (Roberts, 1980). For this type of fluid structure to succeed, management needs to be flexible and dynamic.

Without these traits, accepting inter-organizational movements between employees and business units will be difficult. Management needs to be able to accept the associated risks that could occur when employees move from one part of the organization to the other (Roberts, 1980). The new business venture teams are also uniquely structured and organized at 3M. Where cross functional team formation is encouraged, however, the selection of the new product team members is done at the employee level, where the lead entrepreneur in the company is responsible for forming the team and not his or her product line manager (Roberts, 1980). This is an intentional approach taken by 3M designed to provide the necessary autonomy in the selection of the teams at the employee level to ensure a stronger team is formed. Teams created this way become more robust and more susceptible to a successful project selection (Roberts, 1980). The concept analyzed by Roberts (1980) highlights 3M's management and employee relationships. In this case mutual benefit is created among each stakeholder, which in turn encourages a more focused business development team with a higher level of successfully achieving the end goals (Roberts, 1980).

It is also important to highlight the associated reward system adopted by 3M that is in itself innovative. 3M designs its reward systems specifically to further encourage its entrepreneurially driven employees who are behind the successful launch of new product ventures basing it on the sales of the new product (Roberts, 1980). Concurrently, The team's management is also rewarded in order to ensure a sustainable reward cycle that creates the entrepreneurial ecosystem that supports new product ventures being created across the diverse business units at 3M (Roberts, 1980).

Degussa AG – Creavis Technologies and Innovation Business Development Process

Bröring and Herzog (2008) empirically studied Degussa AG, a German specialty chemicals company that follows a unique model for creating new business opportunities. Degussa AG utilizes a research, innovation and corporate venturing entity called Creavis Technologies and Innovation (CTI) that is uniquely positioned to develop and systematically pursue new innovations generated by the research entity at Degussa AG

(Bröring & Herzog, 2008). CTI has several organizational elements that mitigate the risks involved with exploratory activities that are typical in the chemicals industry.

The first element analyzed by the authors is the utilization of "corporate funded projects" (Bröring & Herzog, 2008). These projects are generated internally with a certain level of corporate oversight (Bröring & Herzog, 2008). The benefit of using this approach, is that it encourages positive interactions to occur between the business project unit's research team and the CTI team that oversees the funding of the research project (Bröring & Herzog, 2008). In doing so, the process strengthens the internal research capabilities of the company since the projects are generated internally from within the general employee population (Bröring & Herzog, 2008).

Furthermore, a continuous dialogue occurs between the research team in each business unit and the CTI team which ensures a better alignment between the stakeholders on both sides of the business (Bröring & Herzog, 2008). Since monitoring the progress of the projects is critical, CTI supports the oversight and continuous the review through the corporate technology steering committee, which focuses on projects that have a short-term market entry target that does not exceed a two year timeframe (Bröring & Herzog, 2008). There needs to be a cautionary point when deciding to have a steering committee as part of the organization. The committee must maintain its openness and flexibility, which is acceptable at Degussa AG, or it will be an additional barrier for entrepreneurial projects to successfully launch. That is why, at this stage, the steering committee needs to focus on the technical aspects of the proposed project and not have ultimate business authority on resource discretion.

Another entity that is used by CTI is the "project houses" outlined in Figure 30 (Bröring & Herzog, 2008). Project houses are designed to capture the benefits across different organizational units within Degussa AG (Bröring & Herzog, 2008). The idea is to have a cross functional team of researchers and scientists that physically come together under one roof and pursue a new technology project for the company (Bröring & Herzog, 2008). The authors highlight the importance of proximity of these employees, where it is important to have them physically close to one another in order to ensure that there is transfer of "tacit knowledge" (Bröring & Herzog, 2008). To have continuous employee interactions within an organization increases teamwork. It also increases knowledge sharing and ensures that when the project team is formed, the individuals are able to fill technical or business gaps and thus mitigate potential project risks.

Tacit knowledge is an increasingly important form of knowledge that can contribute greatly to the innovation process in a company. Idea generation among researchers in a company can increase in magnitude if the company is able to promote tacit knowledge transfer. As described by Nonaka and Takeuchi (1995), it is the type of knowledge that is harder to transfer to others since it is based on personal experiences, and on intrinsic and inherent skills that are challenging to capture or document (Nonaka & Takeuchi, 1995). Therefore, the value from transferring this type of knowledge if successful is very high. If the organization is able to create the means for tacit knowledge transfer among its researchers and scientists the result is a significant increase in productivity (Nonaka & Takeuchi, 1995).

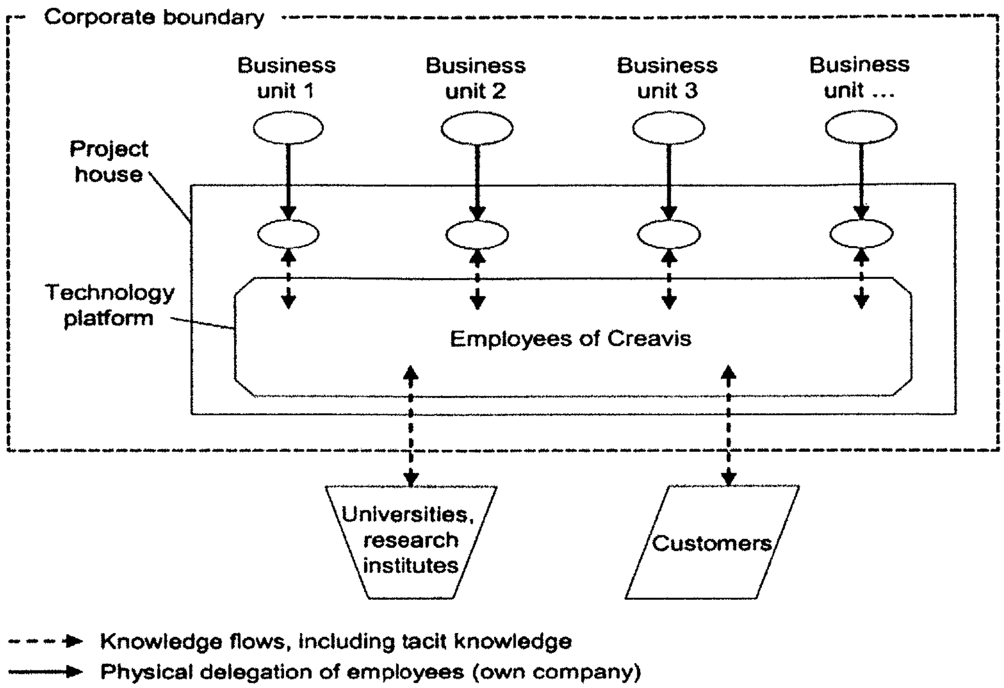

Figure 30: Organizational structure of a project house. Adapted from Bröring & Herzog (2008)

Project houses encourage collaboration between the Degussa AG organization, academic organizations and clients (Bröring & Herzog, 2008). The overall interconnected elements of the system attribute to the success of the new business development processes, whereby all the stakeholders benefit from the simultaneous interactions that occur. The other concept that is used by CTI is the "science to business centers" (S2B) shown in Figure 31 (Bröring & Herzog, 2008). S2B centers increase the operational boundary and focus of Degussa AG. They utilize external resources like the European Union or the German government to access funds in addition to the internal CTI funds available and expand into new markets (Bröring & Herzog, 2008).

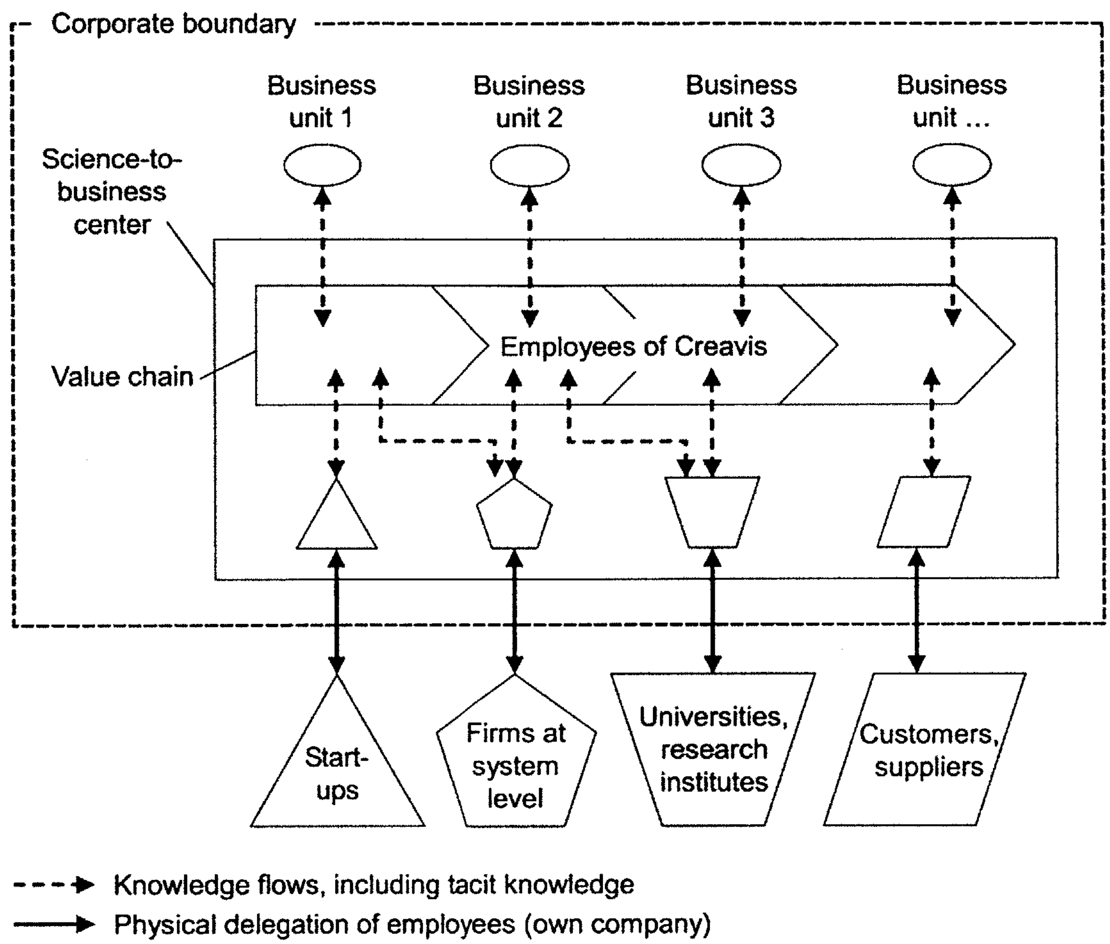

Figure 31: Organizational structure of the science to business (S2B) center. Adapted from Bröring & Herzog (2008)

The entire research and development activity portfolio is moved forward through a synergistic process designed to capture all the competency strengths in the business side and the technical side of the project (Bröring & Herzog, 2008). The authors highlight the example of "nanotronics" which is a technology developed through the marriage of the technical competency of electrical technology and nanotechnology (Bröring & Herzog, 2008). This is one form of synergy identification, however, on a larger scale, companies need to develop the habit of self-identification to find low hanging fruits to further exploit. Moreover, in order for the S2B to be successful in the marriage of technical fields, it needs to be able to connect individuals with different technical and business competencies and create a successful ecosystem to push new business opportunities forward (Bröring & Herzog, 2008).

The relationships with external universities, research centers and independent specialized scientists' needs to also be nurtured in order for this concept to succeed. CTI manages the internal and external technical competencies generated and may even acquire smaller firms to own the technology in addition to the human capital supplementary to the purchase (Bröring & Herzog, 2008). It is clear that CTI's success is because of the autonomous nature of its behavior as a new business generating entity. Degussa AG designed the CTI structure to support autonomous activity that branches out because CTI utilizes this freedom to actively pursue new business opportunities. It is an essential component to expedite the new venture development process.

CTI deploys a tiered approach to conduct new business development activities within Degussa AG shown in Figure 32 (Bröring & Herzog, 2008). The tiers are segmented based on the size of technical gaps that need to be filled through the different internal business development approaches identified, whether it being a "corporate funded project", or a "project house" or the "science to business center" (Bröring & Herzog, 2008). The central funding that is dedicated to innovative activities increases the frequency of new project creation.

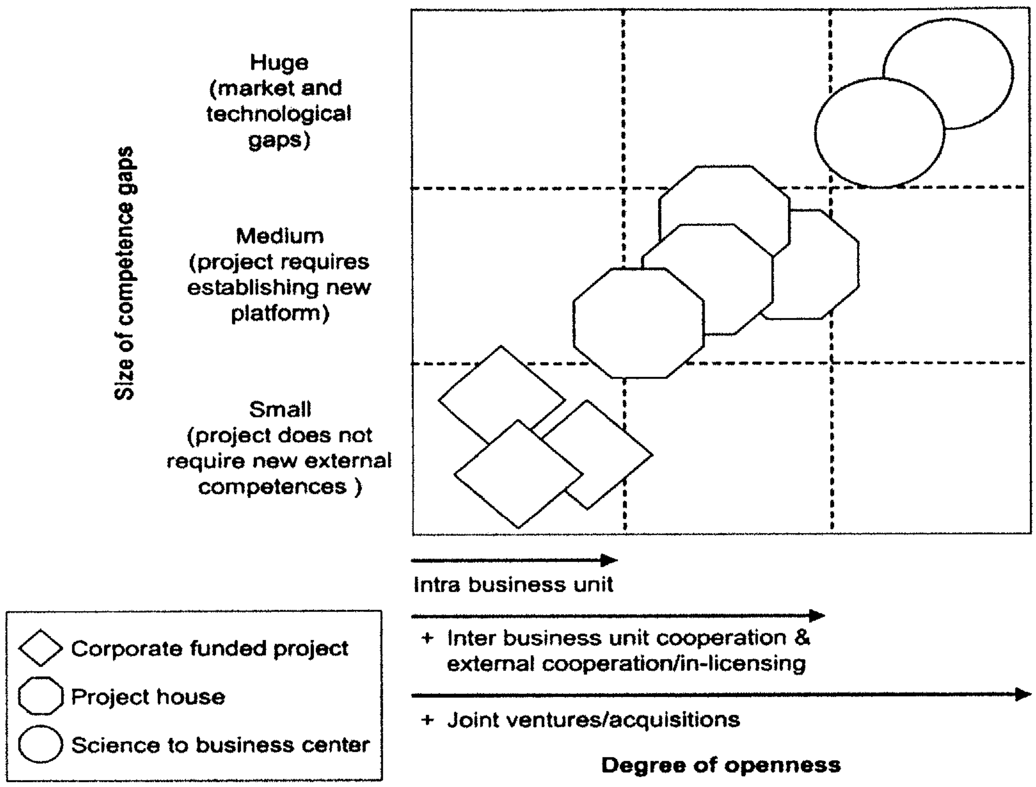

Figure 32: Summary of new business development tools at Degussa. Adapted from Bröring & Herzog (2008)

The size of resrource allocated for each stage depends on the size of the project and the level of risk associated with the new business. For example, smaller projects can be managed internally at the business unit level. Larger projects on the other hand may require Degussa AG to collaborate further with external research organizations, academic institutions, government entities and investment arms to support the new technologies being developed (Bröring & Herzog, 2008).

Chapter 8: The Challenges and Risks of Creating New Businesses

Venturing into the Unknown

Venturing into new and different business areas, that are unique and different from the current business of a company causes growth (Biggadike, 1979). However, this is not always the case. In his analysis of the risks associated with business diversification, Biggadike (1979) cautions that some new business development initiatives may in fact hurt the company in the long run if not managed properly (Biggadike, 1979). By analyzing some historical examples from the 1970's, General Foods for example lost approximately forty million dollars trying to expand its business into the fast food sector, and Rohr Industries' failed its entry into the transportation industry (Biggadike, 1979). He equated entering new business ventures to playing "*Russian roulette*", where the risks involved with moving into an area of non-familiarity may prove to be very challenging for a company and therefore, cause losses (Biggadike, 1979). This risk and reward discrepancy is what companies need to better manage. Entering into a new business opportunity without the required preparation will result in a riskier environment for new ventures to be successful.

Preparation is the Ultimate Protection

Looking beyond the challenges of time and new market uncertainty, Biggadike (1979) recommends that in order to mitigate the potential risk from new business venturing, " fewer ventures be launched, so that each can have the advantage of adequate resources to achieve a good market position, right from year I. Starting too many ventures at the same time diffuses the company's effort" (Biggadike, 1979). He also highlights that it is essential to provide the necessary resources for the company to succeed, "the way to improve the odds and build the portfolio is to commit substantial resources to each venture and to defer immediate financial performance in favor of market position" (Biggadike, 1979). In his assessment, Biggadike (1979) is essentially putting importance on the quality of ventures being launched and not the quantity. Dedicated resources ensure successful outcomes.

Samsung Motors

No matter how large or successful a company may be, there is a real risk associated with venturing into a new business that is not in the realm of the company's specialty. An example for this is the failure of Samsung Motors, which was an attempt by Samsung Group to enter into the car industry.

Samsung Group, which is Koreas largest company ambitiously attempted to venture into a very competitive and saturated automotive market shown in Table 10, putting itself in direct competition with well established Korean automakers like Hyundai, Daewoo and Kia along with leading Japanese automobile companies like Toyota and Nissan, (Young-Ju, 1999).

	Hyundai	Daewoo	Kia	Asia	SsangYong	Samsung
No. of employees (persons)	37,752	18,599	17,652	5,442	5,229	6,360
Production capacity (1,000 units)	1,500	805	830	220	117	240
Total assets (billion won)	1,118.5	15,863.6	4,994.3	1,054.3	3,793.0	4,352.1
Turnover (billion won)	8,698	5,119.1	4,510.7	624.6	794.2	608.6
Net profits (billion won)	-33.2	17.6	-6,649.6	-2,608.2	-499.8	-476.4
Total output (units)	770,558	383,802	362,947	26,549	44,186	41,593
Domestic sales (units)	307,976	86,925	155,053	11,723	30,913	41,593
Exports (units)	519,556	401,379	234,136	13,086	12,519	-

Table 10: Samsung Motors in Comparison to Existing Korean Auto Makers in 1998. Adapted from Young-Ju (1999)

Defying his Board, Lee Kun-Hee the Chairman of Samsung Group (Samsung) at the time stated that, "the automobile business will feed all the Samsung Group affiliates for the coming 10 or 20 years. Although 10 trillion won pumped into the auto unit for next five to six years will generate little profit in the short term, Samsung will operate its auto business in a way that contributes to the development of the nation's automotive industry" (Young-Ju, 1999). Clearly, Lee's vision for the possibilities of success from expanding into a new industry are evident in his statements, however, it is also clear that there was no sound economic basis for entering into this type of new venture (Young-Ju, 1999).

There may be a cultural perspective involved in this case or even a national element of being full of pride and overconfidence. Clearly the pursuit of this venture was a disastrous undertaking by Samsung. The unfortunate reality of this case is that Samsung had many opportunities to take a step back to reflect and reevaluate its progress in entering this new business. However, it seems that it was not successful in saving itself when it had an opportunity. Therefore, the main conclusion from this case is that companies need to have strong self-control and enforce a culture of constant self-reflection when pursuing a new venture, especially when it is in a totally new business. The reflection points give the company the freedom to evaluate its progress in a transparent manner. Without consciously checking progress the company is likely to fall in a vicious cycle of losing its reality awareness and fail.

Chapter 9: Conclusions and Future Research

Conclusions

Corporate entrepreneurship types and methods can be collectively and systematically deployed depending on the business environment the company is in. It is evident from the works analyzed that there is not one single holistic successful model that can be deployed across different companies. The fact of the matter is that companies need to have a strong ability to selecting which methods and processes for corporate entrepreneurship work best for their business structure. The important feature to appreciate is the ability to reflect, reassess and reevaluate the capabilities at hand and select the optimal method that will be complimentary and enable corporate entrepreneurial behaviors and activities to flourish in an organization.

The reality of the situation is that there are specific yet different internal processes that help companies better manage their new business development processes. These processes can only be effective only with certain specific and overarching elements existing in the organizational framework. For example, the prevalence of entrepreneurial attributes is an important factor that helps create a corporate entrepreneurial culture. However, it is important to understand that cultural attributes are not exclusively the reason for the phenomenon to occur.

Companies are able to implement corporate entrepreneurship types in a sustainable manner because of deliberate actions. There was a sense from the research work that these types of entrepreneurial activities are organically generated, the reality is that companies need to be deliberate and aggressive to ensure these traits successfully appear. The conscious effort made by companies to foster cultures that support entrepreneurship is instrumental in the widespread of these specific attributes across the entire organization. Companies can create a consistent flow of new venture activities only through aggressively executing corporate entrepreneurship activities through methodical and systematic processes. As mentioned before as there is no single model that can incorporate the full spectrum of this phenomenon. Researchers have attempted to create pseudo holistic process models for successful entrepreneurship, however these models reflect the unique case of each company's specific experience. Each company's success is dependent upon shifting market environments, changing geo political issues, global economics and technological disruptions. It also highly depends on the industry type. Therefore its is difficult to capture the entirety of the phenomenon in a single comprehensive model. The uncertainties outweigh the certainties.

To better understand why this phenomenon exists, a process overview of what is specific to the industry and the company is needed. Understanding the varying corporate parameters previously discussed will give a better and more holistic perspective on corporate entrepreneurial concepts. All of the companies analyzed in the research exhibited strong corporate entrepreneurial traits. Entrepreneurial traits that are created due to the way these companies are structured and organized, and the diverse industries they are part of. The technologies, products and innovations developed by these companies also dictate the level of entrepreneurial capacity each is capable of. The research attempts to capture the common elements at the individual level. However, these traits although are common in many cases, differ in others. Some aspects of individual entrepreneurial traits appear depending on the internal and external environment the company is facing. The similarities of the traits that were evaluated by different researchers several years apart confirm that specific traits consistently appear when the environment is conducive for it, however not all can be considered consistent. Therefore, companies should deliberately and specifically train and educate their employees to provide them with a supportive entrepreneurial ecosystem that fosters these sought after skills and attributes.

Corporate entrepreneurial characteristics such as risk management, autonomous behavior, initiative and leadership are among the most prevailing traits. A key ability that the company needs to have is to understand these behaviors in the context of the relationship between the employee and the company. It is essential to recognize how specific entrepreneurial traits can become normal behaviors across all levels of the organization. Employees influence each other in an organization and hence create an internal entrepreneurial culture. Companies need to foster this ecosystems to support and promote these employees influencing each other. Therefore it is important for the companies to have in place the proper structure, culture, and processes to create a more encompassing entrepreneurial culture.

Companies can take different corporate entrepreneurial approaches to create new businesses. The goal is to consider these approaches as part of a strategic "toolbox" of methods, processes and systems. Consistency is only achieved if the toolbox is utilized at the most opportune moments in the company's business cycle. Identifying the optimal methods allows companies to consistently utilize and achieve successful implementation of corporate entrepreneurship methods.

The research also found that the concept of innovation is a fundamental component of corporate entrepreneurship. It is the backbone of the new businesses created in recent company histories. Innovation comes in diverse forms, but the important form that supports the development of a successful corporate entrepreneurship culture is through internal innovation or intrapreneurship. Internalizing entrepreneurial capabilities at the corporate level reemphasizes the importance of innovation for corporate entrepreneurship to succeed. It helps employees innovate the business model and create new avenues for the company to grow. Many companies practice business model innovations such as Toyota, Home Depot, Starbucks and Dell. Understanding the specific methods of how these companies successfully reinvent their businesses will take researchers a step further into developing a more robust framework for corporate entrepreneurship implementation.

Future Work

There were very interesting findings related to the concept of corporate entrepreneurship. One area to expand on in the research is to evaluate the impact of implementing entrepreneurial skills and attributes in different contexts. For example, can behaving entrepreneurially be effective in the healthcare industry? Could entrepreneurship skills be relevant in the defense, entertainment and sports industries for example? We have recently observed an increase in social entrepreneurship activities, which creates a closer link to governments. It would be interesting to analyze political figures that joined government coming from the corporate world, preferably an entrepreneurial environment or government figures that joined the corporate world and observe which if any special traits prevail. It would also be interesting to study different settings where entrepreneurial traits, characteristics and attributes are relevant and consolidate a more specialized list of entrepreneurial attributes. Possibly creating a derivative of the corporate entrepreneurship toolbox previously mentioned that can be a closer guide for any entity seeking to benefit from entrepreneurial skills.

As we found in the research, there was not a single holistic model that covered the full spectrum of successful and sustainable corporate entrepreneurship. It would be interesting to specify special cases with controlled boundaries to analyze and attempt to formulate a holistic framework model that addresses the changing factors and maintains a level of control for the analysis.

Another possible expansion of the research work is to investigate a larger number of companies across a longer historical period maintaining the diversity of the industries involved. It provides greater benefit to the researcher if he or she is able to analyze different company frameworks specifically for companies in diverse industries. The goal should be to find more commonalities than differences and create a personal framework of implementing these frameworks. Distilling this knowledge will help create a holistic framework that encompasses a wider array of company environments.

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