Corporate Entrepreneurship Programs:
Practices and their implications in developing economies

By

Marco Teran

B.S. Industrial Engineering
Universidad Técnica Federico Santa María, 1998

Master of Business Administration
Pontificia Universidad Católica de Chile, 2003

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE IN MANAGEMENT STUDIES
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2012

Signature of Author: _____
MIT Sloan School of Management
May 11, 2012

Certified By: _____
Valentin Livada
Senior Lecturer, MIT Entrepreneurship Center
Thesis Supervisor

Accepted By: _____
Michael A. Cusumano
SMR Distinguished Professor of Management
Program Director, M.S. in Management Studies Program
MIT Sloan School of Management

[Page intentionally left blank]

Corporate Entrepreneurship Programs:

Practices and their implications in developing economies

By
Marco Teran

Submitted to the MIT Sloan School of Management on May 11, 2012 in partial fulfillment of the requirements for the degree of Master of Science in Management Studies

ABSTRACT

Corporate Entrepreneurship is driven by external demands and internal leadership. However, this process is difficult to implement in firms because it often conflicts with the core of corporate activities and the accumulated experience of the organization is insufficient to provide proper guidance for managers.

On the other hand, currently, the knowledge base in this area is incomplete and fragmented. It lacks a coherent structure that would allow organizations to achieve productive outcomes. Therefore, developing an integrated perspective to support firms in installing a corporate entrepreneurship structure and, at the same time, develop managers for this task can be an useful topic from the point of view of both established and emerging organizations.

The research question is can we develop a structure with key elements to help managers in the development of corporate entrepreneurship and how to address it in a practical way to install in Latin American countries?

To accomplish it, the methodology considers the analysis based on scientific publications and technical books, along with a complementary research through personal interviews and study cases of large corporations and Chilean companies. The thesis delivers key elements, such as program structures, processes, and leadership.

The main lesson is that these programs could be both disciplined and flexible. "Develop innovation with framework and consistency" is strongly recommended. A second one is that the alignment with the corporate strategy or basic guidelines is a must for these kinds of programs. Thirdly, the support of top management is crucial, and the development of initiatives for changing top and middle manager mindsets. Finally, companies should seek a balance with innovation portfolio (inorganic, radical and incremental), knowledge management, and networking initiatives (open, private).

Thesis Supervisor: Valentin Livada
Title: Senior Lecturer, MIT Entrepreneurship Center

[Page intentionally left blank]

ACKNOWLEDGEMENTS

I have spent a wonderful experience during these months at the MIT. The Master of Science in Management Studies (MSMS) Program provided me flexibility to pursue a variety of courses and time to develop my skills and thinking as a manager and as a man too. My professors and peers have supported me in that way. Special words to Michael Cusumano, Chanh Phan and Julia Sargeaunt, from MSMS Program, whom kind advises on scholar and non-scholar issues made me feel comfortable. I would like to thank them all for meaningful contribution they gave to my learning experience.

In particular, I would like to thank my thesis advisor, Valentin Livada, for his time and insights of this thesis. To my interviewees, who gave me their valuable time to answer questions on how their companies work the entrepreneurial process.

Finally, thanks to my beloved wife and my family. Claudia, my life and who catalyze my dreams. Without her support, I would not be the man that I am. And words for my family, who are the basis of understanding how life is and how to pursue new challengers.

TABLE OF CONTENTS

Chapter 1. Introduction

1.1 Thesis Overview

Corporate Entrepreneurship is driven by external competitive pressures and internal management strategies. The pace of global competition coupled with shareholders demands are putting increasing pressures on organizations to develop aggressive growth strategies. Internally, top management is demanding accelerated growth from the operating divisions, while constraining internal development through the adoption of open innovation principles. Therefore, more and more corporations are increasingly looking for growth leaders, corporate entrepreneurs, who would act as promoters and matchmakers in their business units in order to develop faster new products and services. However, this process of entrepreneurship is difficult because it often conflicts with the core of corporate activities and the accumulated experience of the organization is insufficient to provide proper guidance to the entrepreneurs and their managers.

Moreover, this demand is especially crucial for firms from developing countries. These companies need to be even more cognizant of the need to build structures to accelerate the international expansion and establish solid market position that will allow them to compete against the larger global established firms.

Currently, the knowledge base in the area of corporate entrepreneurship is incomplete and fragmented. It lacks a coherent structure that would allow organizations to achieve productive outcomes. Therefore, developing an integrated perspective to support firms in installing a corporate entrepreneurship structure and, at the same time, develop managers for this task can be an useful topic from the point of view of both established and emerging organizations.

The research question is can we develop a structure with key elements to help managers in the development of corporate entrepreneurship and how to address it in a practical way to install in Latin American countries? This thesis proposes an analysis of

new advances in the field and how to apply them in developing countries. Through this study, the following objectives have been answered: 1) develop a comparative analysis of elements of corporate entrepreneurship programs from developing country-based companies and large corporations; 2) establish recommendations to face Corporate Entrepreneurship and how employees could manage it in a professional and systematical way; and 3) propose key organizational elements to develop it in emerging economies.

The thesis consists of 6 chapters separated by general issues. First chapter defines thesis scope. Definitions of the research subject are defined as well as the importance of the problem. Then Chile is characterized to show why Chilean companies were chosen to give complementary information altogether with the one given by world-class companies. Third point introduces the work methodology used.

Chapter 2 reviews scientific work and know-how about best practices in Corporate Entrepreneurship Programs both worldwide and Chile. Current research advances allows establishing the kick-start framework to define the final structure, which was a complement to the cases revised in Chapters 3 and 4.

Then, Chapters 3 and 4 show cases of large corporations and Latin America companies, respectively. The objective is to describe how the programs work in order to outline conclusions. Cases were covered mainly by interviews and cases study. In every one was considered answering questions from all aspects of an CE system, including program structure, organizational interfaces, processes, skills, metrics, culture, and leadership. Also Chapter 4 includes interviews to Latin America consultants in order to broaden their experience in developing countries.

Finally, Chapter 5 and 6 show a comparative analysis and main conclusions elaborated by a structure described in the methodology. Indeed, it describes mechanisms of ideas exploration and metrics used in vanguard project exploitation.

1.2 Definition of Corporate Entrepreneurship Program

The concept of Corporate Entrepreneurship (CE) was established by Pinchott (1985)[1], who defined guidelines to develop new ideas into current business ventures. Then, researchers have defined several different definitions for Corporate Entrepreneurship. The following is a compilation from Sharma & Chrisman (1999).

Author/s and year	Suggested definition
Schollhammer (1982)	Internal (or intra-corporate) entrepreneurship refers to all formalized entrepreneurial activities within existing business organizations. Formalized internal entrepreneurial activities are those, which receive explicit organizational sanction and resource commitment for the purpose of innovative corporate endeavors–new product developments, product improvements, new methods or procedures (p. 211).
Burgerlman (1983)	Corporate entrepreneurship refers to the process whereby the firms engage in diversification through internal development. Such diversification requires new resource combinations to extend the firm's activities in areas unrelated, or marginally related, to its current domain of competence and corresponding opportunity set (p. 1349).
Vesper (1984)	Corporate entrepreneurship involves employee initiative from below in the organization to undertake something new. An innovation that is created by subordinates without being asked, expected, or perhaps even given permission by higher management to do so (p. 295).
Nielson, Peters, and Hisrich (1985)	Intrapreneurship is the development within a large organization of internal markets and relatively small and independent units designed to create, internally test-market, and expand improved and/or innovative staff services, technologies or methods within the organization. This is different from the large organization entrepreneurship/venture units whose purpose is to develop

[1] Pinchott, G.P. (1985). Intrapreneurship. Harper & Row, New York.

	profitable positions in external markets (p. 181).
Pinchot III (1985)	Intrapreneurs are "dreamers who do", those individuals who take hands-on responsibility for creating innovation of any kind within an organization. They may be the creators or inventors but are always the dreamers who figure out how to turn an idea into a profitable reality (p. ix).
Spann, Adam, and Wortman (1988)	Corporate entrepreneurship is the establishment of separate corporate organizations (often in the form of a profit center, strategic business unit, division, or subsidiary) to introduce a new product, service or create a new market, or utilize a new technology (p. 149).
Jennings and Lumpkin (1989)	Corporate entrepreneurship is defined as the extent to which new products and/or new markets are developed. An organization is entrepreneurial if it develops a higher than average number of new products and/or new markets (p. 489).
Schendel (1990)	Corporate entrepreneurship involves the notion of birth of new businesses within on-going businesses, and ... the transformation of stagnant, on-going businesses in need of revival or transformation (p. 2).
Guth and Ginsberg (1990)	Corporate entrepreneurship encompasses two types of phenomena and the processes surrounding them: 1) the birth of new businesses within existing organizations, i.e., internal innovations or venturing; and 2) the transformation of organizations through renewal of the key ideas on which they are built, i.e. strategic renewal (p 5).
Covin and Slevin (1991)	Corporate entrepreneurship involves extending the firm's domain of competence and corresponding opportunity set through internally generated new resource combinations (p. 7, quoting Burgelman, 1983, p. 154).
Jones and Butler (1992)	Internal Corporate Entrepreneurship refers to entrepreneurial behavior within one firm (p. 734).
Zahra (1995, 1996)	Corporate entrepreneurship is seen as the sum of a company's innovation, renewal, and venturing efforts. Innovation involves

	creating and introducing products, production processes, and organizational systems. Renewal means revitalizing the company's operations by changing the scope of its business, its competitive approaches or both. It also means building or acquiring new capabilities and then creatively leveraging them to add value for shareholders. Venturing means that the firm will enter new businesses by expanding operations in existing or new markets (1995, p. 227; 1996 p. 1715).
Chung and Gibbons (1997)	Corporate entrepreneurship is an organizational process for transforming individual ideas into collective actions through the management of uncertainties (p. 14)

Exhibit 1.1. Definitions of Corporate Entrepreneurship.
Source: Sharma & Chrisman (1999)

The table shows how authors define Corporate Entrepreneurship with different scopes being the core concept the development of new products and/or new markets. It implies formalized entrepreneurial activities with a combination of new resources to extend the firm's activities. Among definitions shown before, Nielson, Peters, and Hisrich (1985) give us one who refers structured units to develop Programs of Corporate Entrepreneurship. Although this definition does not involve the external customer orientation more than internal one as key in the process, it is going to be used as a guide to the thesis definition:

"Intrapreneurship is the development within a large organization of internal markets and relatively small and independent units designed to create, internally test-market, and expand improved and/or innovative staff services, technologies or methods within the organization. This is different from the large organization entrepreneurship/venture units whose purpose is to develop profitable positions in external markets (p. 181)".

Regarding program definition, according to Project Management Institute (PMI), "A program is a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include elements of related work outside of the discrete scope of projects in the program." Then, there are some concepts to be extracted from it:

- Group of related projects are interdependent between themselves.
- They are coordinated by a defined unit to create synergy and aggregate value to the propositions.
- Period of time have to be delimited.

As a result of those definitions, the following features will be considered for Corporate Entrepreneurship Programs:

- Coordinated units to create synergy in projects are necessary. They have to be oriented to internal and external market needs.
- Small and independent units from large organizations[2] could be one or several programs at the same time. Even they may last definite period of time.
- Team facilitates or develops, within organization, projects that are either a) new to the performance features; b) an improvement in known features; or c) a reduction in cost.
- Staff allows training for technologies or methods to develop innovation.
- These programs stimulate and oversee portfolios of innovation projects.

1.3 Why does a Corporate Entrepreneurship Programs Comparative Analysis matter?

As Corporate Entrepreneurship becomes more and more important to organizations, it is helpful to have a structure to address new ventures in organizations. Although there is a broaden literature about Corporate Entrepreneurship, those analyses are specific to activities and areas rather than practical frameworks.

On the other hand, according to Jefferson & Rawski (1994), in emerging economies, organizations are increasingly exposed to competition with developed economies firms with varied business philosophies. Therefore they are compelled to be innovative in their business development, which obliges developing country companies been encouraged to create effective units that become better CE.

[2] The relative size will be considered for companies in developed and developing countries.

In summary, the thesis is searching for insights from both sides: Large companies from developed countries which have defined structures and proven outcomes; and companies from developing nations which have different approaches and produce similar outcomes with fewer resources.

1.4 Why Chile?

Chile is an open economy with significant trade agreements, which presents commercial opportunities for other countries. One of the major effects of these agreements is it has allowed an expansion of external markets. Also Chile stimulates importation from 56 countries resulting 90% of global GDP by favorable tax framework.

According to A. T. Kearney, based upon 2011 index[3] compiled by the U.S. consulting firm, Chile is one of the top ten destinations for multinationals that are trying to establish centers around the world. Only Mexico seems to be ahead of Chile because its proximity to United States. However, the study emphasizes that Chile "has emerged as a niche destination for R&D and analytics," which is strength to create Corporate Entrepreneurship Programs.

Although Chile is a small country, it has a very fast product learning curve, which is a significant feature to test markets. Regarding new technology advances; Chile is one of the best-connected countries in the Region and it has the fastest broadband in Latin America (56th worldwide ranked), with a penetration of 67% of mobile broadband per inhabitant (IDD 2011)[4], and 53,49% of Facebook users (world top ten).

Since Latin America perspective, Chile is very good positioned. According to a comparative analysis among Latin America countries, Kantis and Drucaroff (2009) declares Chile is ranked number one as follows at Exhibit 1.2

[3] The A.T. Kearney Global Services Location Index™, 2011

[4] IDD or Indice de Desarrollo Digital (Digital Development Index) was developed on June 2011 by International Data Corporation Chile (IDC), Chilean Association of Information and Communications Technologies companies (ACTI), and the company Movistar.

	Country	RK-I	Input	RK-C	Business context	RK-O	Output	Total
Benchmark	Korea		150		191		385	254
1	Chile	3	86	2	100	1	100	100
2	Argentina	1	100	1	100	5	57	90
3	Uruguay	2	88	3	82	6	54	78
4	Brazil	4	61	7	60	2	95	75
5	Mexico	9	51	4	76	3	80	73
6	Costa Rica	13	45	5	71	4	74	66
7	Panama	7	56	6	62	10	38	54
8	Venezuela	8	54	9	54	8	41	52
9	Colombia	11	48	10	54	7	42	50
10	Peru	10	50	8	58	17	26	47
11	Bolivia	6	56	16	41	11	36	47
12	Dominican Rep	5	57	17	39	12	35	46
13	El Salvador	15	36	11	51	9	40	44
14	Ecuador	12	48	14	42	14	31	42
15	Nicaragua	17	34	12	44	15	29	38
16	Honduras	16	35	13	44	16	28	37
17	Paraguay	14	41	15	42	18	21	37
18	Guatemala	18	27	18	31	13	32	31
	Average LA		**54**		**58**		**48**	**56**

Exhibit 1.2. Ranking Latin America Corporate Entrepreneurship
Source: Kantis and Drucaroff (2009)

Notes:

RK Total: Total Ranking

RK-I: Ranking on Input (education years, % people with university studies)

RK-O: Ranking on Output (patents, R&D expenses, exports of technological goods)

RK-C: Ranking on Business Context (GPD growth, GPD per capita)

Moreover, Chilean government encourages new businesses through an agency called CORFO. This support is stronger rather than other Latin America countries (see Exhibit 1.3). For example, in 2008 CORFO created five platforms to facilitate corporate spin-off[5] both good and challenged outcomes.

[5] Cortes P., Bastías A. (2010). Reporte Técnico: Evaluación y Mejores Prácticas Plataformas CORFO de SpinOff Corporativo. Project Progress "Análisis de la situación del emprendimiento corporativo en Chile". Funding: CORFO Chile, July 2011.

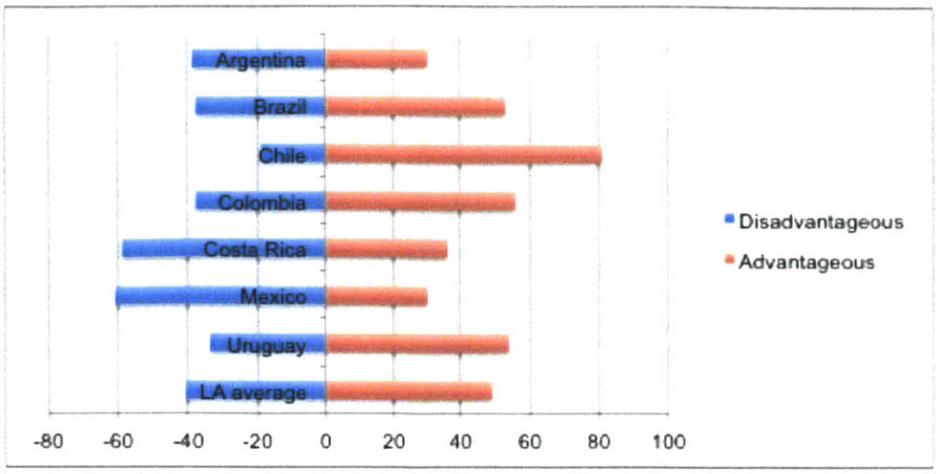

Exhibit 1.3. Government support to growing companies
Source: Kantis and Drucaroff (2009)

Finally, Chilean managers have good skills to develop entrepreneurship, as it is shown by Kantis and Drucaroff at the Exhibit 1.4. They noted Chilean managers spend time thinking and developing new ideas, and there is enough budget to finance vanguard projects. Also managers are good listening to employees' initiatives.

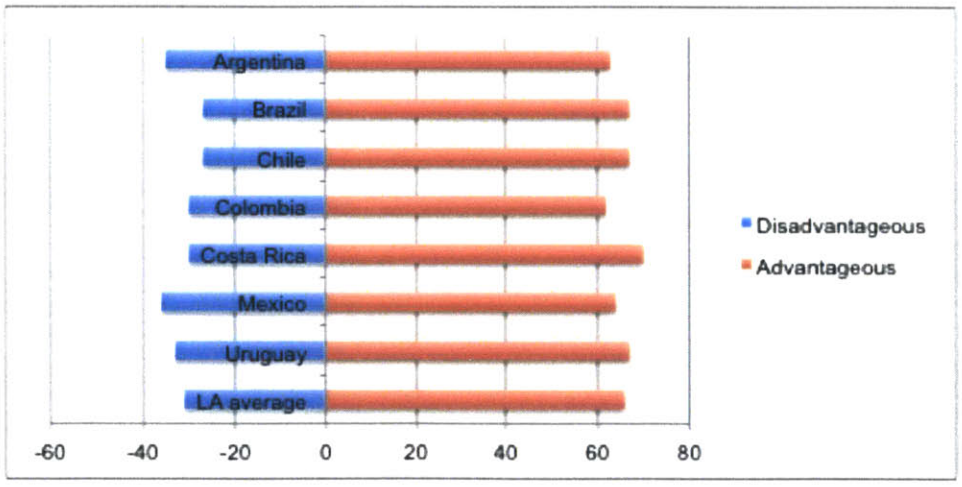

Exhibit 1.4. Managers' competences to develop entrepreneurship
Source: Kantis and Drucaroff (2009)

1.5 Analysis Methodology

This thesis is going to be part of a comprehensive study of structures for managing CE in established U.S. and Chilean organizations and new world advances in the field. The phenomenon is going to be studied to answer questions about contemporary activities, and where the objective is to build methods and models rather than test hypotheses.

The major robust work is reviewing research literature to answer every issue in the following road map shown in the Exhibit 1.5. This one was built based on literature found and interviews made from outside in order to figure out key elements of these kind of structures.

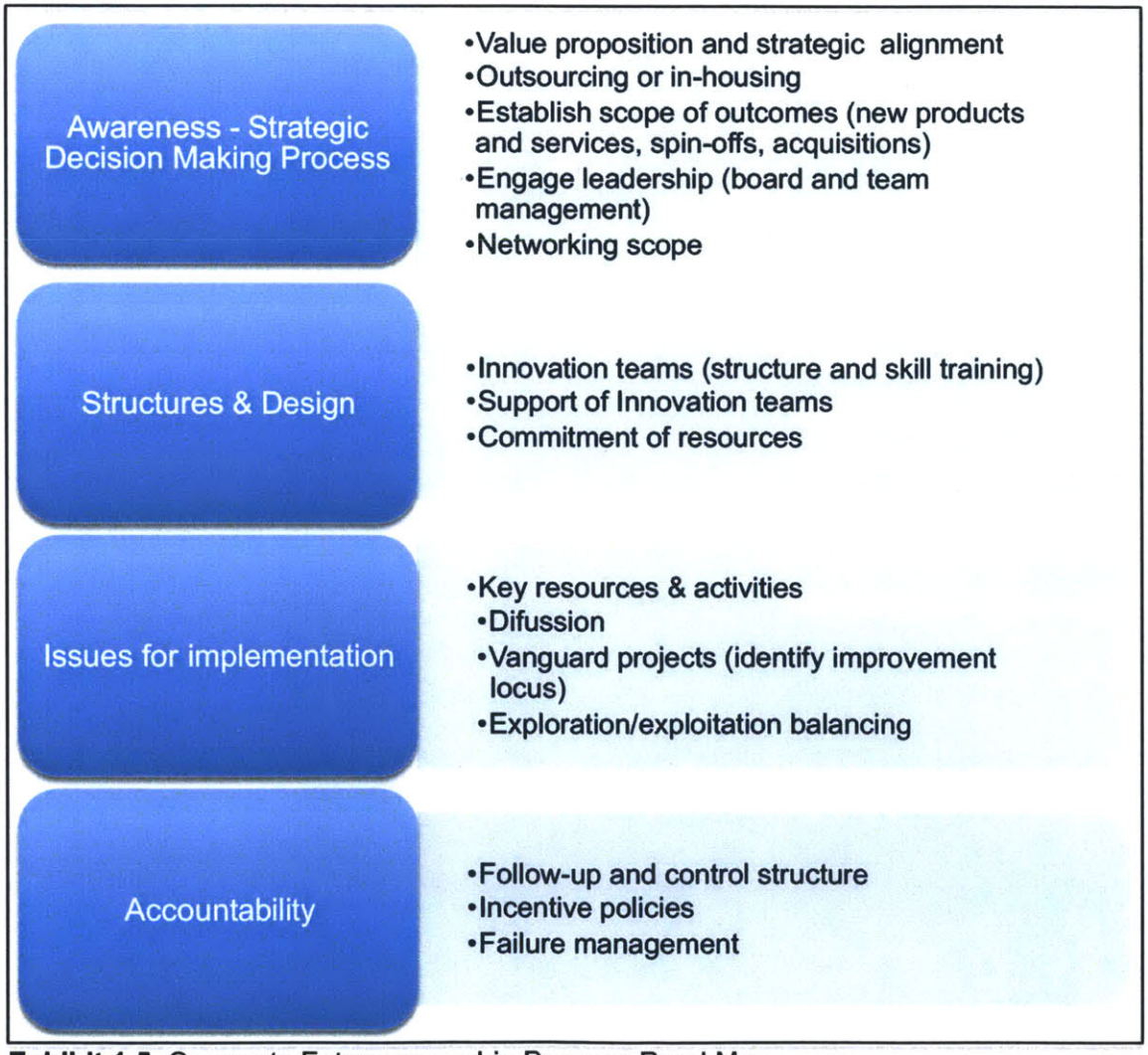

Exhibit 1.5. Corporate Entrepreneurship Program Road Map

Once literature answered prior structure, sample selection and data collection to cover above framework came from a structured protocol of questions for interviewed companies. 8 companies were analyzed, and Chile case also had 5 added consultants broadened in their advances. Interviews lasted one hour. The questions covered all aspects of a CE system, including program structure, organizational interfaces, processes, skills, metrics, culture, and leadership. The following questions were asked:

- What does the CE program involve? Structure, functions, others.
- How does the CE program interface with the business units?
- How does the CE program interface with board and senior management?
- What are the coordinating mechanisms between innovation exploration (ideas search) and exploitation (project developments)?
- Regarding exploitation, what are the decision taking and funding mechanisms?
- What are the skills of those leading CE projects? Who do you work in? Senior, middle, and first-levels of management.
- Do you have a training program to develop skills?
- Do you have a reward and incentives system?
- How do you do with failed projects?

In order to develop the analysis, two comparative broad-level perspectives were done: from each company studied and then it was performed an analysis of elements from the scientific literature, and remarkable insights from the analysis of each company. Both worldwide large companies and Chilean firms were evaluated based on an adaptation of the Plus/Delta (+/Δ) Evaluation in order to prioritize practices and outcomes for each key element of the road map shown above. This method is a simplified SWOT analysis, which allows having a comparative study for each company. The Plus/Delta feedback tool (sometimes called Plus/Change) is a mean of identifying what is going good and what needs to be changed.

Chapter 2. Advances of Scientific Literature

In the review of the literature on corporate entrepreneurship, it was analyzed more than 40 scientific papers and books about Corporate Entrepreneurship. Most of the papers have appeared in specialized journals such as Journal of Business Venturing and Entrepreneurship Theory and Practice. The following description keeps up the road map structure mentioned in Chapter 1.

2.1 Awareness – Strategic Decision Making Process

The awareness starts with the value proposition of the creation of Corporate Entrepreneurship. Value Proposition is defined as a bundle of products and services to create value for customer basis. Some elements should be considered to develop that value proposition. Eric von Hippel (1994) showed how *understanding of customers* could be more important to project success than discovering and developing new technologies. Liu, Luo, and Shi, (2002) explained that *organizational learning* manifests itself as a driver that influences the creation and handling of market information. Therefore, organizations with a market-driven culture could improve organizational learning skills to create more value for customers. In addition, Schindehutte, Morris, and Kuratko (2000) explained that Corporate entrepreneurial process may exist in established organizations at any level and within any area of the organization. Therefore, this kind of programs not only to lay down without size and location restrictions, but might establish a consistent framework with the organizational aspects of the firm to allows a proper support to new business development.

In a practical way, Wolcott and Lippitz (2010) defined four models that represent representative approaches to develop corporate entrepreneurship (Exhibit 2.1). These authors noticed that these groups are internal organizations to support a variety of services within the firm, with the purpose to handle the process from concept development to initial launch of new products and services. Their models are segmented permitting flexibility in the amount and management of resources.

• Opportunist Model. Companies with a culture related to the backing of internal new business development, begin the corporate entrepreneurship without a formal administration or dedicated funding. According to the authors, all companies start as opportunists but most of them should change to the others to succeed in the long-term.

• Enabler Model. Some companies like the attitude of opportunists, and top management makes the decision to create dedicated funding and other support elements for corporate entrepreneurship. This model is specially created to encourage entrepreneurial spirit and the formation of internal teams across the company.

• Advocate Model. While opportunists and enablers are free-spirit in entrepreneurial activities, it is often a need to be supported by a formal office, which catalyzes and coordinates new concepts and the formation of internal teams, and most of the time this office should negotiate with business units to fund, partially or totally, the initiatives. Authors explain that this model is not enough to create breakthrough concepts.

• Producer Model. Corporate entrepreneurship might be laid down for a specific but corporate perspective. This model is chosen mainly by industries with complex integrated systems such as high-tech and aerospace.

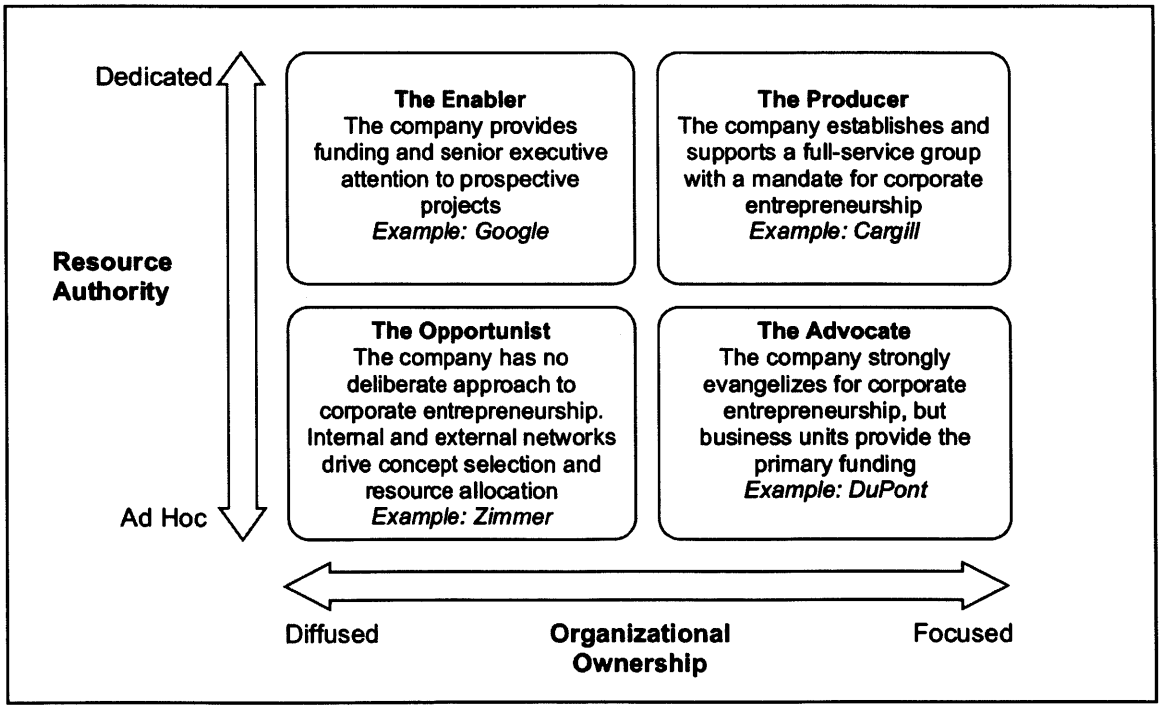

Exhibit 2.1. The four model of corporate entrepreneurship
Source: Wolcott and Lippitz (2010)

In general, these authors have observed that companies that are considering a corporate entrepreneurship programs generally undertake the following steps.

- Point the way: Declare a strategic vision for sustainable growth with the leverage of core competences to encourage the corporate entrepreneurship.
- Delineate objectives: Although some models express no formal organization, company starts with a small internal team to define and diffuse their goals for corporate entrepreneurship.
- Neutralize the naysayers: Build communication and trainee plans to change the corporate mindset and create leadership across the company.
- Select and support a corporate entrepreneurship model: Evaluating the variety of models, firms should select the right model (Enabler, Advocate, or Producer) according its areas of interests, resources and competences.
- Start with quick wins: Consolidate the model with fast successful track records and develop activities to protect from failures and delays.
- Evolve: Expectations and goals should be often explained and managed.

In order to select the best choice, the Exhibit 2.2 summarizes the points made about the three deliberate models of corporate entrepreneurship.

	Enabler Model	Advocate Model	Producer Model
Strategic Goal	Facilitate entrepreneurial employees and teams	Reinvigorate or transform business units; support corporate entrepreneurship teams	Exploit crosscutting or disruptive opportunities
Essential Function	Provide independent funding and top executive attention to future business leaders with new ideas	Evangelize, coach, and facilitate business units in pursuing new opportunities	Provide full-service corporate entrepreneurship by conceiving, screening, funding, coaching, scaling, and reintegrating new business concepts
Inputs	Dedicated money, executive engagement, and recruiting and personnel development	Well-connected corporate veterans with a small staff of business-building coaches and a CEO imprimatur	Well-connected corporate veteran leadership with full-time staff and significant, independent funding
Outputs	Proven concepts, but generally within the firm's strategic frame (Note: Enabler programs can also help facilitate overall cultural change.)	New businesses relatively close to a business unit core or significant business unit process efficiencies	Self-sustaining and/or potentially disruptive new businesses that may or may not fit any existing business unit
Success Factors	○ Culture of innovation ○ Structural flexibility for teams to pursue projects	○ Expertise in building new businesses ○ Significant team facilitation	○ Respected leadership with significant internal decision authority

	○ Well-defined executive involvement in milestone funding decisions ○ Effectively communicated selection process and criteria	capabilities ○ Skill in coalition building and internal and external networking ○ Senior executive visibility and support	○ Expertise in building new businesses ○ Explicit attention to corporate entrepreneurship executive career incentives
Typical Challenges	○ Senior executive bandwidth ○ Maintaining coherence and discipline with respect to corporate brands. ○ Finding and satisfying project champions (that is, making sure enabler processes do not become a "black hole" for ideas).	○ Overcoming business-unit near-term pressures ○ Finding "business builders" among executives who are traditionally rewarded more for execution than innovation.	○ Reintegrating successful projects into the core ○ Leadership succession ○ Lack of business-unit support

Exhibit 2.2. Structure of the three deliberate models of corporate entrepreneurship.
Source: Wolcott and Lippitz (2010)

In addition to review a model to start, Corporate Entrepreneurship must be analyzed through the strategic perspective (Ireland and Webb, 2007). Strategy is concerned with the firm's long-term development (Ghemawat, 2002) and Corporate Entrepreneurship is engaged whit this long-term sustainability. Recognizing the importance of Strategy as well as Corporate Entrepreneurship, the attributes listed in the Exhibit 2.3 join both elements as Strategic Entrepreneurship.

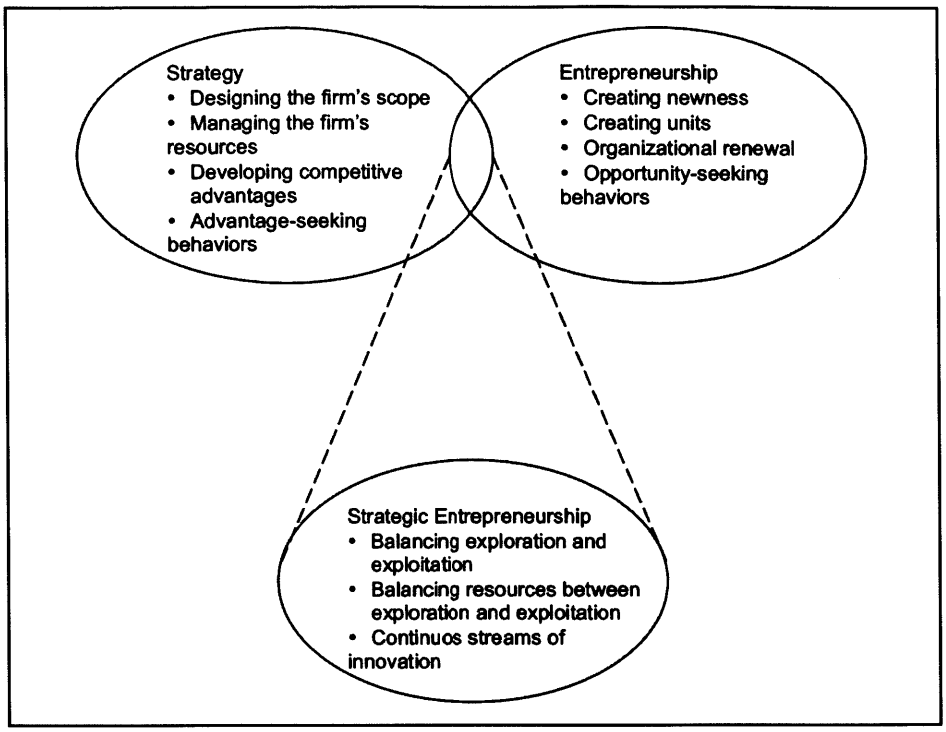

Exhibit 2.3. Strategic entrepreneurship
Source: Ireland, R. D., and Webb, J. W. (2007)

Ireland and Webb (2007) coined the concept Strategic entrepreneurship (SE) as a term used to capture simultaneously the exploitation of today's competitive advantages and the exploration of innovations, basis for tomorrow's competitive advantages. The SE concept, as they described it, could be difficult to be implemented but its practice is key to have a balance between opportunity-seeking (i.e., exploration) and advantage-seeking (i.e., exploitation) behaviors (Ireland, Hitt, and Sirmon, 2003)[6].

There is another question to be answered before to start a Corporate Entrepreneurship Program: Is it better to ask for external support (outsourced advisers) or to work in-housing. Scientific literature has not developed a discussion on this issue; therefore this question will be answered below in next chapters.

Once management has decided to establish a Corporate Entrepreneurship Program and has assessed their resources, it is a need to delimit their scope. According to Morris at el (2009), adopting corporate entrepreneurship could be problematic when

[6] The balance exploration and exploitation of innovation is analyzed below in this chapter.

managers do not know what goals they are trying to achieve. Therefore, employees involved in entrepreneurial initiatives should recognize the boundaries of their work. These limits can take a variety of forms (Exhibit 2.4), from the creation of new ventures by the company, called spin-off, innovation in the business model, products and services, or operational improvements, and even mergers and acquisitions to bundle operational synergies.

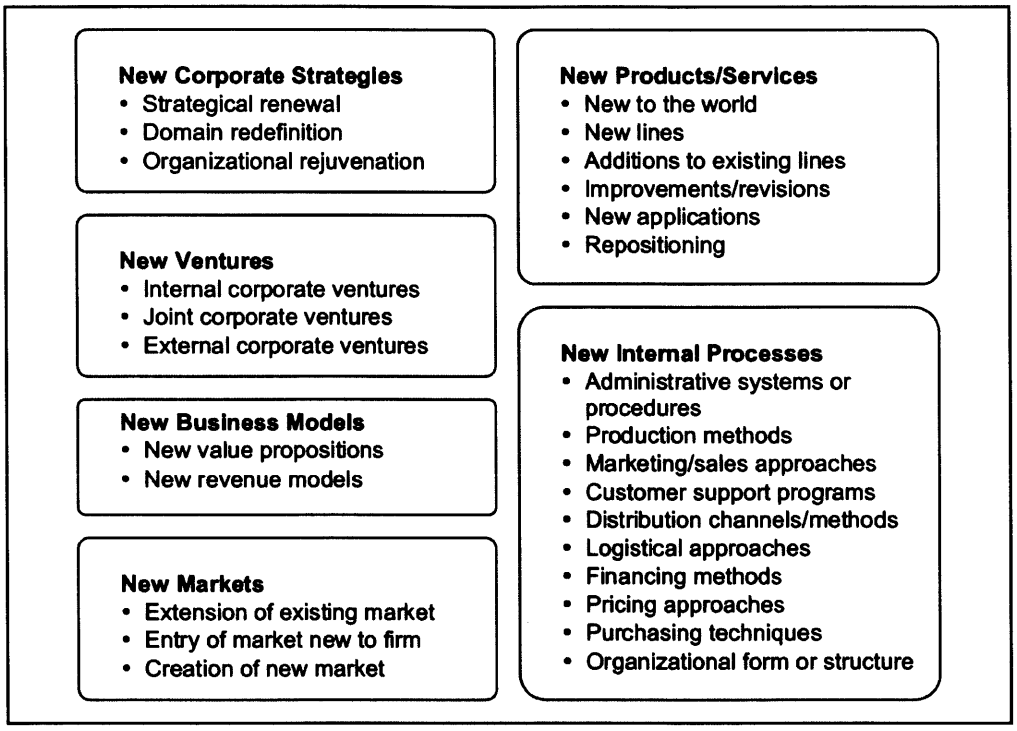

Exhibit 2.4. Six types of corporate entrepreneurship outcomes
Source: Morris M.H., van Vuuren J., Cornwall J.R., Scheepers R., (2009)

In addition to kinds of outcomes, it is indispensable to engage leadership through the creation of specific management team. Wolcott and Lippitz (2010) explained that any high-performance group has to incorporate some form of management that coordinate functions, metrics, and feedback across the firm. Moreover, most successful groups have a very limited number of coordination procedures, simple metrics, and constant feedback. Most activities are managed as projects, and each project has specific objectives, activities, and resource requirements. Project managers are committed with the forward of milestones and the coordination among them happens through regular communication among them. They recognized that the long-term

interests of the group require connecting on a regular basis; sharing challenges, insights, and opportunities; and balancing the portfolio of projects.

In addition to the management of teams, before even the kick-start, some authors recommend to assess entrepreneurial culture. Cortes and Bastías (2010) analyzed Chilean Corporate Programs and discovered a relationship between failed programs and lack entrepreneurial culture. Scientific literate has some good examples on measurement the level entrepreneurial orientation, the Corporate Entrepreneurship Assessment Instrument (Hornsbya, Kuratkoa, and Zahra, 2000) is a representative survey to identify it. According Cea, Sanhueza, and Taraoka (2011), Chilean companies have had good outcomes with the selection of intrapreneurs through the Test McClelland and individual survey to measure competences. However, there is no scientific evidence but practical one to testify the prior assumption.

Related to specific practices from CE networking, Kelley, Peters, and O'Connor (2009) suggested that current individual network structure is less important for CE than the firm's ability to form new networks for new purposes. Additionally, authors emphasized the need to have networking cultivator as well as broker roles in network activities for non-routine activity. Therefore, the need to develop the networking system is crucial. In order to develop this area, Tapscott & Williams (2006) recommended to start a networking planning process with a comprehensive map of company's innovation ecosystem that positions its value creation and assesses the interdependencies to capture a fraction of them. Business partners and competitors should be included, and extends this participation to academia, public research institutes, think tanks, creative communities, and contract research organizations. They recommended a broaden spectrum and cover all relevant disciplines that intersect the company strategy. Regarding the networking scope, the open innovation is a driving force, which is the support of most of the innovation and emerging technology groups. Nambisan and Sawhney (2007) defined the following four models of innovation based on external networks, distinguished by network leadership centralized or diffused and innovation defined or emergent:

• Orchestra (centralized leadership, defined innovation space). Group of partners collaborates around a defined architecture, coordinated and managed by a firm, mainly large company. Example: the Boeing 787 Dreamliner project.

• Creative Bazaar (centralized leadership, emergent innovation space). The lead company controls the commercialization of a broad portfolio of innovations from the network, facilitated by intermediaries. Example: iTunes.
• Jam Central (diffused leadership, emergent innovation space). Network is composed of a platform without a clear coordinator. Example: a musical jam session.
• Mod Station (diffused leadership, defined innovation space). Improvement is implemented by unorganized open groups of users and experts around an current architecture. Example: the computer gaming industry.

2.2 Structures and Design

a) Innovation teams: Structure and skill training.

Most companies need to do more than just create a separate group to pursue new business developments. The statement "develop innovation with a framework and consistency"[7] pursues that companies must develop strong and empowered innovation teams. Wolcott and Lippitz (2010) suggested that in the early stages of the process, companies should implement explicit procedures for generating, and evaluating new business ideas, such as scenario planning, technology scouting, disciplined intellectual property management, and stage-gate milestone management. Then, Human Resources Department should support with a structured trainee to encourage these skills. Regarding leadership, the right managers for these programs are not the same for a traditional position. The teams need a leader with a will to encourage the technology scouting and take controlled risks simultaneously.
The same authors identified six functions in which executives must be engaged:

- Frame: Construct set of criteria to deliver strategic guidelines.
- Proselytize: Convert mindset across the company.
- Allocate: Assign and negotiate resources with business units.
- Coach: Recruit, and trainee across the company.
- Track: Follow-up of initiatives.
- Embody: Reflect a mindset and actions according to the position.

[7] Term coined as main lesson to this thesis.

In addition to the selection of innovation team leaders, Stevenson (1999) distinguished two categories of work styles within companies: the trustee and the promoter. The trustee promotes well-organized controlling and accentuates the effective utilization of resources. Complementarily, the promoter is driven by the business opportunity and pursues his goals regardless not have resources property under control. Then, the last one is the proper manager for this kind of teams.

Promoter		***Trustee***
Driven by perception of opportunity	*Entrepreneurial Domain* / *Administrative Domain*	Driven by resources currently controlled
Pressures towards this side • Diminishing opportunity streams • Rapidly changing: Technology Consumer economics Social values Political roles		Pressures towards this side • Social contracts • Performance measurement criteria • Planning systems and cycles

Exhibit 2.5 Strategic Orientation of manager approaches.
Source: Stevenson, 1999

On the other hand, regarding perceptions and positions of management (senior, middle, first-level), Hornsby et al. (2009) established that senior and middle managers, due to their better support in terms of business and financial backing, were more likely to implement entrepreneurial ideas. However, first-level managers were relatively less opportunities to see their ideas implemented. Then the creation of committee to support from champion should be strongly recommended. Supporting this above proposition, Hornsbya at al. (2000) also declared that middle management are proper managers in these programs because their primary job responsibility is to monitor activities of subordinates while reporting to upper management. Moreover, middle managers are responsible to implement the top management's policies for the two organization levels below them. Therefore, following the prior proposition of champion and company sponsor, Cea, Sanhueza, and Taraoka (2011) encouraged the existence broaden support entities (sponsor, support team, and innovation team) to facilitate the intrapreneurial ideas. Sponsor is a Top Manager (upper management) who advises,

reinforces, and enhances intrapreneurs inside organization. Support team is a multidisciplinary group that delivers know-how and know-who, and validates technically the idea. Innovation team is in charge of the company innovation, and support to intrapreneurs on improvements and feedback. In addition to the structure, authors suggest the creation of the innovation committee, composed of CEO, Innovation Manager, and sponsors. This committee assesses formally project progresses once a month.

b) Commitment of resources

Regarding allocation of resources, corporate entrepreneurship requires discipline to manage resources but with flexible mechanisms with the purpose to succeed of getting new opportunities. Therefore, the budget mechanisms should be focused in terms of getting quickly outcomes rather than a strict accountability. Morris, Schindehutte, and Allen (2006) provided empirical evidence that this balanced approach about rigidity - laxity delivers better results of corporate entrepreneurship. The same authors concluded that accountability must strongly emphasize simultaneously fiscal self-control and looseness that permits teams to experiment new initiatives that are consistent with company strategy and it core competences.

2.3 Issues to consider for implementation

a) Change mindset – Diffusion and approaches to knowledge flow

Carla O'Dell, President of American Productivity & Quality Center (APQC) offered in his book[8], a portfolio of approaches that it is used among APQC's customers and members to help knowledge flow. She warned that a single and specific approach will not solve the change mindset across the company and, she strongly recommended a portfolio of initiatives with a variety of levels of information flow, defining four categories of knowledge flow.

[8] O'Dell, Carla (2011). The New Edge in Knowledge: How Knowledge Management Is Changing the Way We Do Business (p. 46). Wiley.

1. Self-service. First of all, the access to information through intranets, role-based portals, and search tools. This is a self-service approach to link employees at their work site to the knowledge they need to do their job more effectively.

2. Lessons learned. Once there are some outcomes to specific innovative processes and projects, lessons learned might allow employees to get, and reuse information from their own experiences. Also known as after-action reviews, employees analyze and summarize events to capture lessons, extracting factors of success or failure to take remedial actions or avoid making the same mistake again.

3. Communities of practice. The activity consists of employees creates communities to share and learn about a topic, such as emerging technology or market trends. These learning networks might be face to face or virtually. In comparison with the two above, communities of practice are more formal with defined objectives and commitments to share experiences and best practices among their members.

4. Transfer of best practices. The last activity consists of identify and transfer successful practices and processes among units in an organization. The gap analysis is required to value and close performance gaps in order to update to higher levels of functioning in all units.

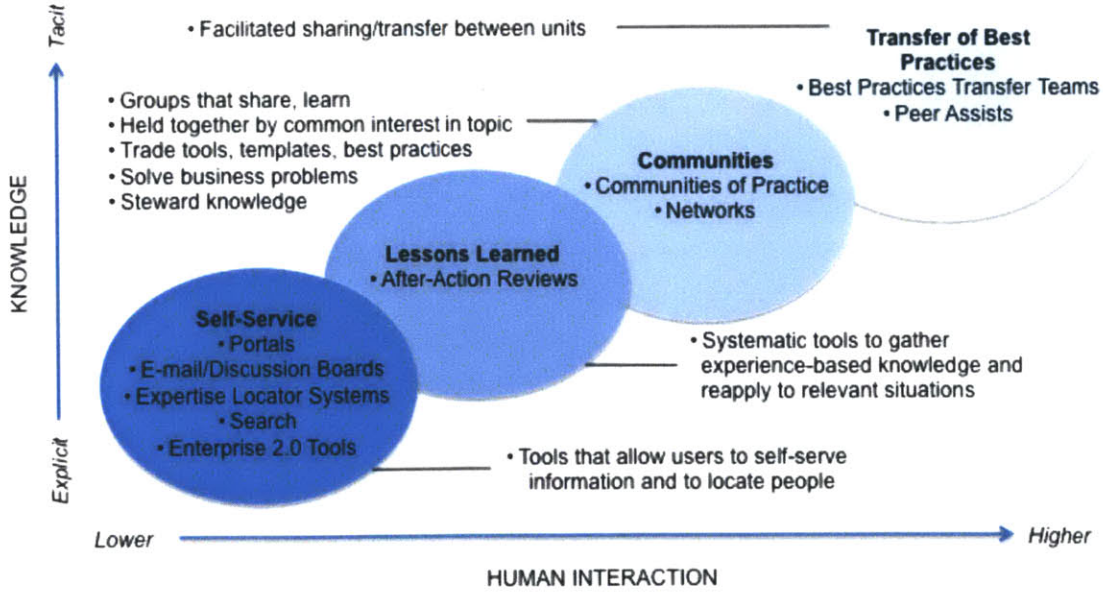

Exhibit 2.6. Categories of knowledge management approaches
Source: O'Dell (2011)

b) How initiatives could be implemented: Vanguard projects

Brady and Davies (2004) identified a 'vanguard project' as "the first project to be launched in a deliberate effort to move away from a firm's core business activities and venture into a new market or technology base". Frederiksen and Davies (2008) showed that the concept of vanguard project refers to a "first-of-its-kind project" to enable to the company to enter new markets or incorporate new technology to its client portfolio. Theses authors noticed that companies used successfully vanguard projects to endeavor new technologies or markets, and generate new knowledge and learning across companies. The main goals to develop new innovative lines of business projects are based on:

- achieve sustainable competitive advantage through the exploitation of firm's resources and capabilities, allowing company being adaptive and reactive to the changes of industry.
- explore new ways to develop businesses by entering new markets or exploiting emerging technologies.

Furthermore, Ireland and Webb (2007) showed that large firms have used internal corporate venturing (ICV) projects to initiate organic growth and diversification of their business. An individual ICV project can also mature into a significant and separate new business. For example, these authors explain the case of British Petroleum (BP), which used a mix of vanguard projects and new business units (e.g. BP Alternative) to go accelerative technologically beyond their core business. Additionally, ICV projects are a way of updating for companies. Burgelman (1983) explained how ICV projects moved into new businesses regardless of top management's opposition. These projects were initiated by middle managers, who had senior management resistance due to misalignment on current strategies, but then they were successfully adopted linked technological possibilities to underserved market needs.

According to Allen & Henn (2007), at any project, authors suggested that when a project is initiated, it is strongly recommended to be integrated them into project teams in order to get synergies and acceleration of the initiatives. They suggest that during the initial period, team members come to know and understand each, and each other's specialties, better. Team members develop working relationships so it is where the

synergy happens. Additionally, the same authors suggested that teams should not be left too long time, and should be dispersed to their home departments. The team-building phase will have its payoff at this time, and coordination across departments will be far easier.

c) Business design and accelerator of ideas

Wolcott and Lippitz (2010) strongly recommended that business design and product or service development happen in parallel, not in sequence process. They delivered that the following steps be included in the business design process:

1. Define the target customer segment(s) and value proposition.
2. Study the business to determine what dimensions might change and redesign them to improve customer value. They establish 12 dimensions that need to be considered and combined into a complete definition of the new business: 1. Offerings; 2. Platform; 3. Solutions; 4. Customers; 5. Customer experience; 6. Value capture; 7. Processes; 8. Organization; 9. Supply chain; 10. Presence; 11. Networking; and 12. Brand
3. Screen the business concepts to explore in more detail.
4. Prioritize the uncertainties related to each innovative concept.
5. Design pilots or experiments and build an action plan to resolve the uncertainties.
6. Iterate until find the right business system for the market.

Moreover, these authors mentioned Cargill's Method as accelerator of ideas and could be useful as performance procedure. The Cargill's Emerging Business Accelerator (EBA) generally proceeds in 5 phases as follows:

1. Origination. EBA asks the following four basic questions for a early business concept: i) What is the idea?; ii) What is the value to the customer?; iii) What is the value to Cargill?; and iv) What are the points of differentiation and the competitive advantage?
2. Preliminary due diligence. During the next 15 days, a basic market assessment is done: i) Is it a growth market?; and ii) What is the competitive landscape?. It is an assessment of the marketplace potential and the economics of the market rather than an economic evaluation.
3. Due diligence. EBA develops a formal due diligence process between 60 and 90 days, before to deliver an investment memo to its board. If the investment is approved,

EBA begins to implement a high-level plan, which includes: i) What are the most critical uncertainties?; ii) How much money is it going to take to get there?; and iii) How many people will be needed?

4. Development establishment. During next 30 days, recruitment among employees and commitment of funds happens.

5. Monitor performance. This process depends on the duration of the business development (1–5 years) and basically is searching the question "What is the progress in resolving the critical uncertainties?" If a project is not achieving its milestones, EBA revisits it.

d) Management of innovation portfolio: Balancing different kinds of innovations.

Corporate entrepreneurial activities are mainly risky by introducing new business developments. Therefore, it is strongly recommended to manage a diversified portfolio to decrease the risk of projects. Although there are a variety of methods to manage innovation portfolio, Morris (2011) delivered the following one, which was chosen because it is consistent with our premise of alignment with the corporate strategy:

1. Determine the burn-down rate, which is the gap between firm's current revenue and profit streams. This rate is the growth required from innovation. It consists of the difference between targeted growth trajectory and the down curve of declining future revenues.
2. Determine the growth goals for revenue, profit, and ROI for the portfolio of initiatives.
3. Assume key elements in the Industry in order to know external forces of competition and market change (technology and market drivers).
4. Set the overall strategic direction through corporate strategy and the commitment of resources.
5. Define the criteria to be considered in the portfolio evaluation.
    a. External strategic factors: Leverage commoditization, digitization, social media trends, globalization, among others.
    b. Internal innovation factors: Uniqueness, Technical and commercial feasibility, Intellectual property protection feasibility, R&D cost to completion, Time to completion or next decision point, Durability of competitive advantage, Creation

of innovation platforms to keep sustainable competitive advantages, Leverage existing capabilities.

6. Define the weighting of the factors described below.
7. Determine a risk-reward profile for each project and design cluster of projects by risk-reward matrix or other tool.
8. Evaluate the proposals and choose the level of investments.

e) Balance between exploration and exploitation.

Frequently managers explore more ideas than they can execute them. Then, one of the major concerns in Corporate Entrepreneurship is the balance between idea exploration and exploitation of projects. Ireland and Webb (2007) discussed 3 key actions that managers can take in order to achieve a better balance:

i. Understand the exploration and exploitation balance: In any market, a firm may make wrongly decisions about a 50/50 balance (in terms of resource allocations). However, there are a variety of elements to be considered such as frequency and significance of external environmental changes, level of market life cycle, and the firm's resources and capabilities. Companies competing in a dynamic market needs to emphasize exploration rather than those in stable environments.

ii. Identify the optimal balance: Deeper analysis will help to identify an optimal balance. The external environment analysis should identify current as well as emerging trends in the technological, sociocultural, economic, and demographic areas in which the firm competes. The internal environment analysis should examine the firm's strengths and weaknesses to forecast how external changes could affect the company.

iii. Introduction to the middle-level manager: Authors believe that middle-level managers play two roles in strategic entrepreneurship. First, these managers connect operational-level and strategic-level. Middle-level managers are instruments in how a strategy becomes operationalized, as well as identification of opportunities in lower organizational levels. Second, middle-level managers are well positioned to develop and follow-up procedure in operational, structural, and cultural environment.

In 2009, same authors, Ireland and Webb, explained that actions of strategic entrepreneurship requires more than a mindset change. It implies a shift in the firm's

structure, culture, and operations in each stage of exploration and exploitation (Exhibit 2.7). Each stage has different viewpoints and the company should certainty have the flexibility to meet the future demands from their current positioning and core competences. The entire organization of a strategically entrepreneurial firm differs from others in how to react to changes in the external environment.

	EXPLORATION	EXPLOITATION
Operational	Firm activities are undertaken to absorb and efficiently integrate diverse and broad stocks of knowledge	Firm activities focus on depth of knowledge and efficient means through which to leverage this knowledge in the market
Structural	Flexibility and autonomy are facilitated with decentralized hierarchies and semi-standardized/semi-formalized routines and guidelines	Focus and speed are facilitated with centralized hierarchies and relatively higher levels of standardization and formalization
Cultural	Acceptance of the need to experiment, willingness to absorb risk and uncertainty, and motivation to overlook failure encourage the pursuit of radical innovations	Need for certainty, short-term goals, and commitment to focus drive incremental innovations and market-based actions

Exhibit 2.7. Attributes of exploration and exploitation
Source: Ireland, R. D., & Webb, J. W. (2009)

f) Transition between exploration and exploitation.

Another conflict related with strategic entrepreneurship is the transition process between exploration and exploitation for the operational, structural, cultural levels. Ireland and Webb (2009) delivered five key tools that can help firms overcome challenges in transitioning from exploration to exploitation.

i. Forming and transforming teams: Changes from exploration and exploitation conduct to migration of employees' position and role, hence uncertainty regarding job security as well. Developing a framework with clear limits and milestones allows company to keep the firm's stability and employee's concerns.

ii. Setting expectations: Introducing expectations for roles and responsibilities during the transition provide structure and certainty. In addition, it allows employees to realize its new role in the next phase.

iii. Establishing a clear timeline with milestones: The shift from a long-term focus in exploration to the short-term focus of exploitation conducts a employee's mindset change to facilitate their planning and operational process. The development of timeline with milestones offers to employees of pre-established dates data to follow-up, progress and obstacles.

iv. Developing contingency plans: Contingency plans provide actions for reasonable changes in a firm. Unpredictable competitor actions, technological and market trends, new regulations constraints, can change firm's plans during the transition.

v. Justifying changes: Dealing with employees' concerns should be established to guarantee a transition from exploration to exploitation. Mainly, justifying change is a way to create perceptions of fairness and necessary game, and providing feedback to employee concerns are good insights to facilitate the transition.

g) Another source of idea exploration by Industrial Upgrading

Azadegan and Wagner (2011) proved an indirect association between Industrial Upgrading (IU) and idea exploration process. First, the research provides empirical support on the validation of IU and its effect on the firm's innovation performance. The second contribution is related to IU allows the company to improve the relationship between exploitative innovation and explorative innovation. Finally, the real benefit is that companies are able to transfer the ability to learn from other parts of their business and allow the learning abilities of an organizational broad spectrum.

2.4 Accountability

a) Follow-up and control structure by management

Companies should have formal practices for generating, collecting, and evaluating new ideas. Phase-gate or stage-gate is the most popular, which explains that innovation could be rationally managed with deadlines and deliverables, performance tracking, and standardized procedures across projects. Wolcott and Lippitz (2010) confirmed that well adapted stage-gate applications can add significant value but advised warning about some concerns. Strict implementation with inappropriate metrics early-stage concepts can precipitately kill promising opportunities. It is often not possible to define the return on investment of an early-stage concept. Additionally, inflexible stage-gate processes do not fit for new radical concepts. Another example, later revenues by social media business could kill a good distribution platform. Therefore, their recommendation is that companies need to take their time to develop the capabilities at various horizons.

On the other hand, Collins (2001) has suggested that "great companies have a culture of discipline, where rigor and discipline enable creativity and entrepreneurship". Goodale at al. (2011) suggested that managers should understand and treat innovation as a process that might be a structured and disciplined. The innovation calls that managers should understand potential outcomes and deliberately construct procedure to handle it. There are enough knowledge of rules, methods, and processes to facilitate a successful innovative business development. Moreover, authors concluded that innovation performance is linked positively with properties of operational control variables, specifically risk and process control, and management support and organizational boundaries. Then, managers should adopt a systemic perspective with respect to the management of innovation, recognizing the interfaces and interdependencies that exist between traditional business and the emerging one.

Regarding the role of senior management about progress control and accountability, a benchmarking research was undertaken by the APQC (American Productivity and Quality Center) concluded that their functions in leading the New Product Development (NPD) effort could not be understated. Senior management must

oversee new product developments by providing both the leadership and the necessary resources (Exhibit 2.8).

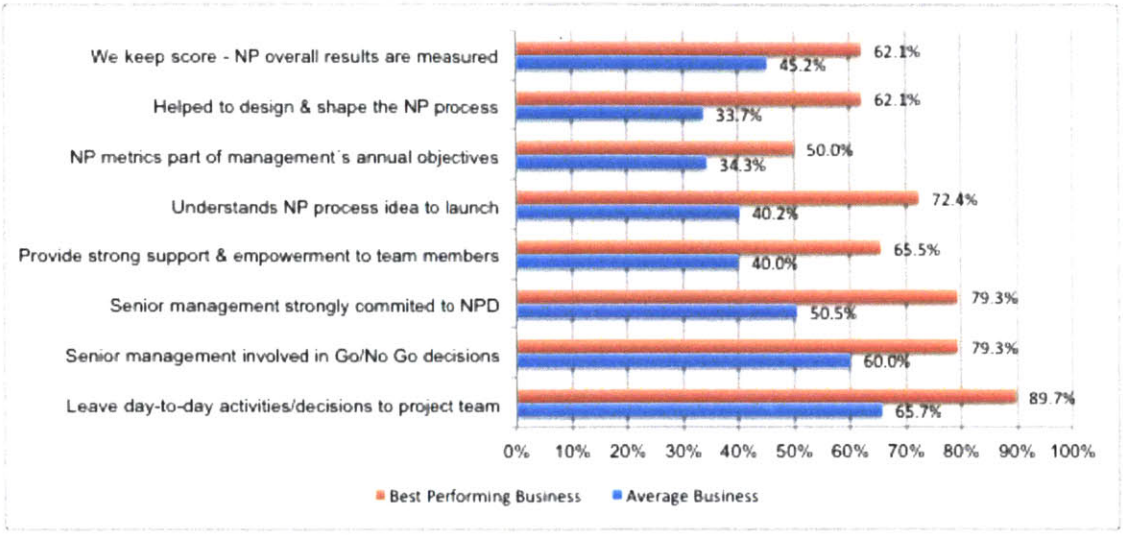

Exhibit 2.8: Senior Management Practices, Roles and Commitment to NPD
Source: APQC (2003)[9]

In addition to the role of senior management, Board's accountability is also a remarkable issue. Zahra, Filatotchev, and Wright (2008) developed a conceptual model that explains the consequences of low vs. high accountability by Board and low vs. high absorptive capacity [10] for companies' Corporate Entrepreneurship. When the two variables are low, both entrepreneurial initiatives and creation value fall. When low accountability is associated with high absorptive capacity, CE is compensated by manager performance. When accountability is high and absorptive capacity is low, the common decision is the replacement of managers, moderating levels of CE. Finally, positive complementarities promote CE in firms (Exhibit 2.9). In summary, companies should reconsider their board's role and absorptive capacity for the impact in entrepreneurial activities.

[9] Information obtained by white paper "Benchmarking Best Practices Performance Results and the Role of Senior Management" by Robert G. Cooper and Scott J. Edgett. Reference N 32 in www.stage-gate.com/knowledge.php

[10] Authors defined absorptive capacity as the capacity allow firm to bring external knowledge to improve its ability to growth by building capabilities and competences.

	TMT absorptive capacity	
TMT accountability	Low	High
Low	Negative complementarities. Low levels of CE activities (Quadrant 1)	Substitutability: High absorptive capacity compensates for ineffective boards. Moderate levels of CE activities (Quadrant 2)
High	Substitutability: Effective boards enable the replacement of managers with low absorptive capacity Moderate levels of CE activities. (Quadrant 3)	Positive complementarities High levels of CE activities (Quadrant 4)

Exhibit 2.9 Accountability, absorptive capacity and corporate entrepreneurship.
Source: Zahra S.A., Filatotchev I &, Wright M., 2008

b) Incentive policies

Most compensation and reward systems are not designed to promote corporate entrepreneurship, and many actually destroy innovative behaviors in companies. To be effective, rewards should reflect three considerations (Morris et al. 2009). First, top managers should create rewards for managers willing to take calculated risks. Examples include milestone awards, which can demand four to five times the salary of an employee over a period of years, bonuses tied to project risk levels, and teams sharing a percentage of profits from their entrepreneurial initiatives (Block & MacMillan, 1995). Second, financial incentives are sometimes less important than social incentives. Examples including formal acknowledgement from senior management, granting of freedom, and the allocation of company resources to support employee ideas are significant recompenses for intrapreneurs. Third, employees who are encouraged in the entrepreneurial activities have two moods between the entrepreneurial career and corporate career so the predictability of a secured retribution and the attraction of business development with delimited risks.

c) Failed project management

Shepherd et al. (2009) defined entrepreneurial project failure as "the termination of a project due to the realization of unacceptably low performance as operationally defined by the project's key resource providers (as opposed to projects terminated for other strategic reasons)". Boulding and Morgan (1997) estimated that 35 to 45% of all new products fail. Therefore, one of the issues to review is how to manage these failures. On the other hand, learning from failures often takes time because it involves the negative emotional reaction from the loss of something important, process of unhappiness or grief recovery that eventually is eliminated (Shepherd, 2003).

Shepherd et al (2009) noticed that there are two primary approaches to the management of failure. The first acknowledges the negative effect on tasks performance by the loss of something important. The second consists of the positive impact that that loss as purpose of learning. This approach allows managers to handle failed projects by adjusting the negative emotions of loss something important. Therefore, it could contribute to screen these high levels of negative emotions and control them.

According the importance of this issue, Shepherd et al (2009) developed a model to manage failed project. Firms with an entrepreneurial projects portfolio could develop coping self-efficacy procedures among their staff. This system can permit to improve their concepts of failure in more psychologically and organizationally productive ways. Consistent with this point, McGrath et al. (2006) suggested the following advice based on their study of corporate venturing activity within Nokia Corporation: "Manage with a portfolio mindset, not a project mindset, to maximize the company's benefit from venturing." The recommendation to use a portfolio mindset and the development of coping self-efficacy is that individuals can better appreciate the value existing between projects.

Chapter 3. Practices from multinational companies

Previous chapter gave a look to Corporate Entrepreneurship's literature related to decision-making processes in terms of structure, implementation, and accountability. This was shown through significant new scientific discoveries in the related subject.

This chapter is about the study of the structures of multinational companies, which develop actions in Corporate Entrepreneurship to finding out structures and practices installed in companies. In order to get that information, it was conducted an analysis of the following companies: British Petroleum (Mining), Cisco (Telecom), Procter & Gamble (consumer goods) and an IT industry company.

3.1 British Petroleum

British Petroleum Co (BP) is one of the largest energy companies in the world, which provides customers with fuel for transportation, energy for heat and light, retail services and petrochemicals products for everyday items. BP's Corporate Entrepreneurship is mainly managed by a Chief Technology Office. The BP's Office of the Chief Technology Officer (CTO) was formed in 2001 with the mission to exploit emerging information technologies (IT) in BP's businesses.

The CTO team has two primary objectives: changing mindsets within the company and generating positive impact in BP's businesses through exploitation of technology innovation. The following Exhibit 3.1 shows the main activities of this office.

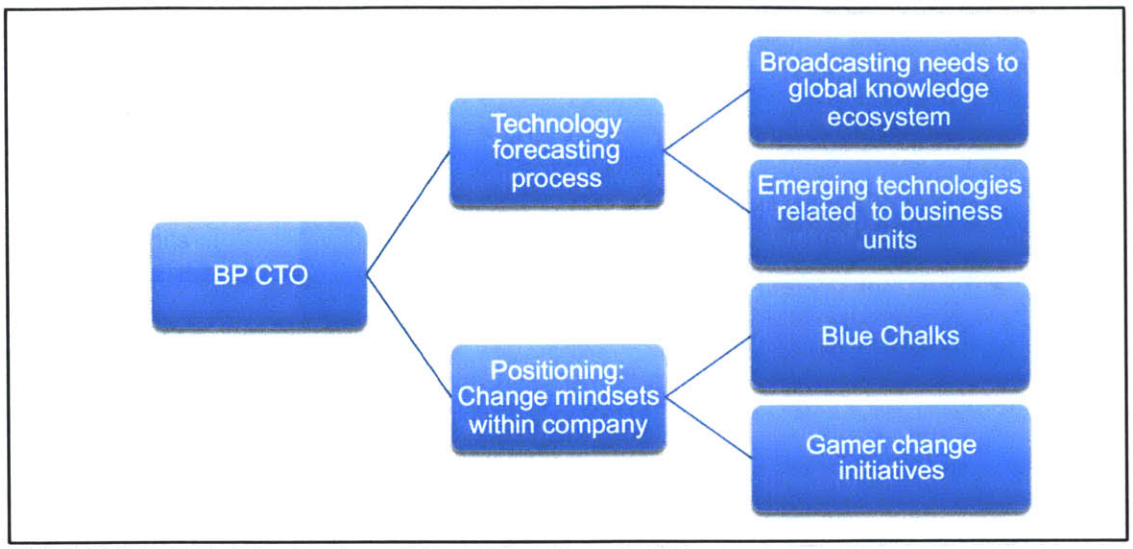

Exhibit 3.1. Chief Technology Officer Functions in BP

BP adopted a "venture capital" model, formed by small but well-informed organizations. The team, group of 12 people with deep knowledge of BP's businesses and broad appreciation of technology, links to external knowledge sources. In addition to the nuclear organization, CTO has a modest budget about US$10M and no formal authority. Having limited resources pursues than business units it has funding a fraction of the projects, which ensures the CTO's activities are connected with business units' expectations. Following the same purpose but focused in rewards, CTO's team members have performance contracts which considering not the number of technologies investigated but only those adopted by business units. CTO has to deliver value to business units and to do it through persuading business people with profit and loss responsibilities.

Therefore, CTO's team members meet regularly with business units' executives to propose opportunities for broaden competitive advantage in comparison with the rest of the industry. The team uses a technology transfer process to filter emerging technologies through technical feasibility and economic viability. BP's CTO often explores its requirements through its competitive landscape, which includes suppliers and customers. In response, BP gets innovative ideas and technology solutions. The team receives thousands of proposals each year. If a technology seems promising, it is checked by a small due diligence, a narrow scope and well-defined objectives. The screened process selects 40-50 technologies per year and then they are considered to

be sponsored by BP's business units. Finally between 5 and 10 technologies are selected each year.

Inside BP's organization, CTO office acts as matchmakers, coaches, and translators, having already performed due diligence on the outsider technology platforms and their relevance for BP's business units. Inside they work with IT department, BP's technology groups, and business units. On the other hand, one of the key success factors is CTO office not just connects business units with emerging technologies, but articulates the value proposition for BP and demonstrates what the technology contribution for the business is. Validating a technology in a business application is one of the team's critical services. Moreover, focusing on the real business value helps build a positive reputation to the office.

Additional to the technology surveillance and technology transfer process, the CTO office puts special attention to engage senior management leadership through a variety of programs called "Blue Chalks". The CTO makes almost 100 presentations to business executives every year by facilitating vendor visiting process for business units' cross-synergies. At Blue Chalk events, BP executives also meet with technology thought lead users[11] and business specialists. Between topics included are security, sensory networks, global sourcing, the workplace of the future, and collaboration and social networking.

In addition to the Blue Chalks, each year the CTO team works collectively to select and execute one major program, called "game changer initiatives". It is organized around a related group of technologies. These programs offer significant business insights as one to two-years mainstream application. Some of the innovative programs have generated positive impacts up to US$100M. Through the years these programs have been global sourcing (2002), moving from proprietary to commodity platforms (2003), using wireless sensing to solve business problems (2004), field force automation (2005) and predictive analytics (2006). The stages for game changers are: 1) ideation and evangelization; 2) pilots and scale up; and 3) transition to business units. During the

[11] Lead user is a term coined by Eric von Hippel in the year 1996. It is defined as "users ahead of the majority of users in their populations with respect to an important market trend, and they expect to gain relatively high benefits from a solution to the needs they have encountered there". Chapter 2, Democratizing innovation. Von Hippel, E. (2005).

first stage, the CTO starts with a complete market analysis, checking at every business units trying to identify how they are involved with the technology. The office talks to lead users and finds out if executives of other companies are willing to discuss the advantages and disadvantages of implementing these initiatives. Also it visits technology vendor and research groups. Then they conduct "proof of concept" tests to establish whether the technology could achieve the value propositions for BP. During this period, CTO socializes the idea, offering managers the opportunity to analyze the concept for a few months.

The innovative partnership that CTO office has formed consists of technology suppliers, consultants, venture capitalists, academics, business practitioners and industry associations. In some cases, BP provides the business environment for the technology partners to have field tests in the BP's plants. BP benefits of this plan, influencing the management of the pilots and obtaining discounts on emerging technology. Partners also benefit from this, having a real-life laboratory for improving and testing their products. Actually BP does not seek to own the results of these pilots but decreases the technology costs by commoditization.

3.2 Cisco System

Cisco Systems Inc. (Cisco) is the worldwide leader in networking technologies. Cisco's portfolio of products is focused upon three market segments: corporate market through enterprise networking and service provider, small business and home.

Cisco has developed several strategies to face the Corporate Entrepreneurship. The most obvious program is its acquisition process. Since 1993, Cisco has acquired more than 120 companies, from small startups to large well-established firms such as Linksys, Scientific Atlanta, and WebEx. The acquisition process works with very good outcomes in terms of employee retention. In the first two years after the deal, Cisco retains nearly 100 percent of the new employees from the target company. Long-term retention levels are high too, at 85 percent from 2002–2006 and 45 percent since the early 1990s. It is one of the key elements in the generation of its Corporate Entrepreneurship.

The acquisition structure consists of the development of a well-defined integration approach for acquired companies. Cisco's integration activities are found in three broad phases, each one related to typical events in an acquisition deal as following the Exhibit 3.2. Within each phase, a cross-functional team, called central acquisition integration team, work for a company wide approach to integration. This team broadly defines methods, tools, and processes that can be standardized across Cisco departments and business units. Also each Cisco's department assigns an employee team to every acquisition integration activity. For each acquisition, the cross-functional team also manages the whole integration activity and chooses a leader and a cross-functional integration team. For each Cisco's department involved in the process, the central team manages the planning, execution, and monitoring of specific integration activities in each phase.

Phase	Deal Activity	Integration tasks
1	Discovery and planning	Scope assessment, business modeling, detailed due diligence, and integration planning
2	Execution	Ensuring operational readiness Activation of employees, resources, and integration tasks
3	Monitoring	Ongoing measurement and adjustment of the integration activity

Exhibit 3.2. Cisco Process-Driven Approach for Acquisition Integration
Source: Cisco 2007

On the other hand, Cisco spends few resources on Research. Most of its innovation budget is focused on development for iterations of established products or in new products scheduled to be launched within 12 to 18 months. Cisco's strategy knows everything that is going on in the telecommunications ecosystem so that it would be the first buyer when a start-up begins gaining importance. Most of the entrepreneurs consider a purchase by Cisco to be a big deal because their companies are going to become one of the industry dominant players.

In order to close the Cisco's Corporate Entrepreneurship circle, in 2005 company executives studied and envisioned several trends in information technology that suggested the company need to become much more engaged in learning and exploiting

new business opportunities than just follow innovation in its core markets. They realized that innovation in the information technology industry was moving from the enterprise space, mainly e-business, to the consumer space. Therefore, they created a new staff called "Emerging Markets Technology Group" (EMTG). EMTG's mission is to detect important market trends while they were still incipient. It is for conceive ways in which Cisco could take advantage and organically makes grow new ventures inside the company. Cisco decided that a central group with a strong staff would be required to pursue these kinds of venturing projects. Currently, EMTG has 201 employees, most of them located in San Jose, California.

EMTG is looking for markets that can generate US$1B annually within five to seven years. Its goal is to launch 15 successful new businesses. It means that EMTG must have 1000 ideas or more for preliminary investigation and no more than 1 in 50 ideas can be turned into large-scale concepts. EMTG starts its exploration testing its business partners, customers, and employees. The EMTG main program is called iPrize. The winner of an iPrize is awarded for US$250,000 and Cisco commits to invest at least US$10M in the winner idea. In the first version, Cisco received more than 1,200 ideas, but most of them were not remarkable. However, EMTG's attitude is that sometimes small-scale ideas represent individual views of a big market opportunity. They realized that maybe it is necessary a dozen ideas to develop a concept which represents a lucrative market opportunity.

Therefore, Cisco detected that building integrated concepts also needed intrapreneurs. Many, if not most, companies entrepreneurial capabilities are difficult to achieve. However, Cisco is lucky because the acquisition process mentioned above. When these prior entrepreneurs find out what EMTG is doing, they kindly accept the offer to support new businesses. EMTG find these new intrapreneurs by 3 ways: 1) Acquisitions, when Cisco buys a company and simply rebrands and sells company products; 2) Venture investment, when Cisco takes equity stake and board positions in a new company; 3) Alliances, when Cisco partners with another company and build a new Cisco business. Therefore, Cisco closes a virtuous process to develop corporate entrepreneurship (Exhibit 3.3).

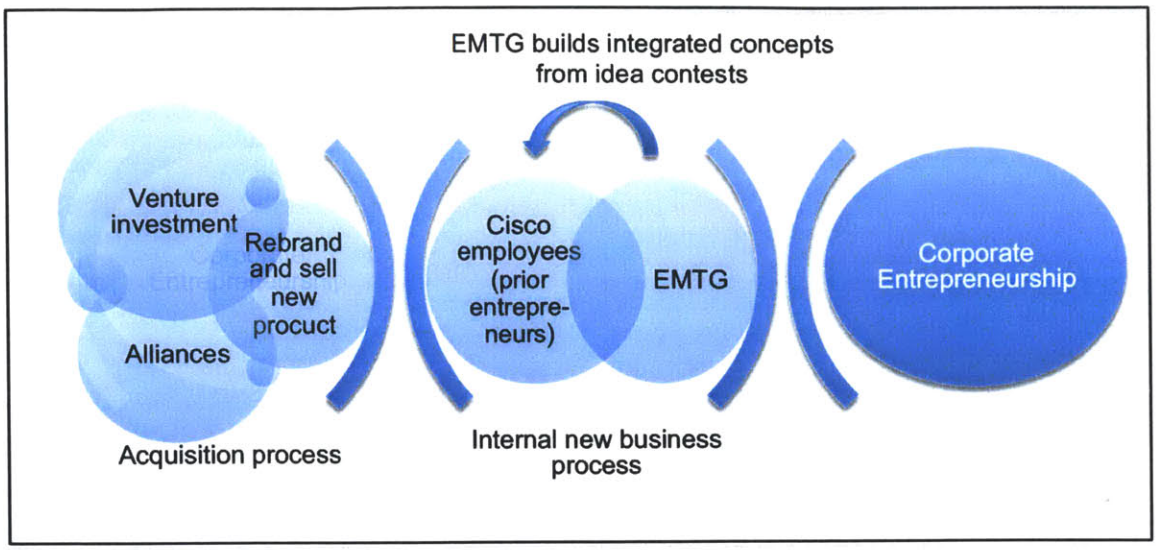

Exhibit 3.3. Cisco's virtuous process

On the other hand, due to EMTG builds businesses from integrated concepts, early customers are viewed as development partners, not only potential sources of future revenue. Therefore, first clients are chosen judiciously to generate as much relevant market information as possible. If pilots were good in market tests, six months before a full market launch, EMTG forms a "tiger team" of people from manufacturing, marketing, support operations, sales and other divisions to work out all topics of the business. The "tiger team" meets every week to plan and follow-up the market launch strategy. Also this is the time when organizational conflicts are solved, so the transition from a proven technology and market into a scaling business does not falter, as often happens during this critical and difficult transition.

In addition to the internal capabilities, Cisco has realized the importance of top and middle management role, so Cisco Center for Collaborative Leadership was created. It was designed specifically to foster leadership in innovation-oriented culture, and to transform Cisco's business culture from command and control to collaborative one. It delivers to high-potential executives a full management toolkit to recognize and embrace visionary thinking. The program lasts around 16 weeks.

3.3 Procter & Gamble

Procter & Gamble is a global company that provides consumer products in the areas of pharmaceuticals, cleaning supplies, personal care, and pet supplies. One of the core strengths of the company is its innovation strategy. The company uses innovation to create value with retail partners, to satisfy customers and to create new business models for maintaining sustainable growth.

P&G has created most of its phenomenal growth innovating through building global research facilities and hiring the best scientific talents in the world. However, the release of new technologies has put more and more pressure on their innovation budgets. Hence, P&G discovered that small and midsize companies were starting to do the new innovation. Moreover, university and government labs have become more interested in forming industry partnerships, and they were interested for ways to monetize their research. Based on that trend, in 2000 the CEO A.G. Lafley announced the goal to acquire "50% of P&G innovations outside the company". The strategy was not a replacement of the capabilities of their 8,700 researchers and support staff[12], but an improvement of their leverage. They preferred to capitalize on internal capabilities instead contracting with outsiders to develop innovations to lower-cost providers.

The key success factor (KSF) to develop this approach was the collaboration with organizations and individuals around the world, searching for proven technologies, and products that P&G can improve, scale up, and market them. The initiative to develop it was named "Connect and develop", and it determines how the company collaborates with external sources for innovative ideas and technologies. A web site was built (www.pgconnectdevelop.com) to communicate with the network, where all the P&G's needs were put in categories. Then anyone who is interested or has the solution could propose his or her ideas and be assessed by P&G. Currently, there are 30 people in the Open Innovation office with presence in the Americas (West, South, east, North), Europe (the UK, Germany, Belgium, Luxembourg, Israel), Asia (Japan, China, India and recently Singapore).

[12] Headcount Year 2010.

Although the process has to be very fit, it is crucial to know exactly what business units are looking for. Therefore, the Open Innovation office seeks ideas that had some degree of success, such as working products, prototypes, or technologies, and evidence of consumer interest. Then they focus on ideas and products that would benefit on P&G's competences. Hence the company addresses their technology surveillance to three stages. It starts with the *top ten consumer needs*, a phase, which once a year P&G asks what consumers need, and how to manage the growth of its brands. Then, they create a *list of adjacencies*, which is fulfill with new products or concepts that can help to take advantage of existing brand. Finally, P&G uses *technology game boards*, a platform to evaluate new technology acquisition to overlap products in other categories.

Once they establish the boundaries of search through these 3 stages, P&G works close with proprietary networks and open networks to look for ideas in the ecosystem: government, private and academic labs, as well as suppliers, retailers, competitors, development and trade partners, VC firms, and individual entrepreneurs. First of them, the proprietary networks, consider two sources. One of them is Technology Entrepreneurs, which is a 100 specialists network based upon six connect-and-develop hubs, located in China, India, Japan, Western Europe, Latin America and the United States. This network creates external connections by meeting university and industry researchers, and forming supplier networks, along with exploration of the scientific literature, patent databases, and other data sources. The second source is Top Suppliers. P&G has estimated that top 15 suppliers have R&D staff of 50,000. They represented a huge potential source of innovation. And P&G has created a secure IT platform that allows sharing technology briefs with main suppliers. In addition to the proprietary networks, P&G uses open networking such as NineSigma and Innocentive, connecting technology problems with entities that can develop solutions; YourEncore.com, platform of retired scientists; and Yet2.com, online marketplace for intellectual property exchange.

After products and ideas are identified by networks around the world, P&G screens them internally. Then, initiatives are promoted to specific managers through an online resource called "eureka catalog," using a template that helps organize certain facts about the product (description, Intellectual Property, current sales). The catalog's descriptions and pictures are distributed to general managers, brand managers, R&D

teams, and others throughout the company worldwide, according to their interests. If the product is interesting for a line of business, the External Business Development (EBD) group contacts the product's manufacturer and develops the licensing negotiation and other deal structures. EBD group is also responsible for licensing P&G's intellectual property to third parties.

If the final product prospers in the marketplace, the rewards for employees involved in its development are similar. P&G has two broad goals for this reward structure. One is to make sure that the best ideas, wherever they come from, rise to the surface. The other is to exert steady pressure on the culture, to continue shifting mind-sets away from resistance against "not invented here" things.

Although Connect and Develop is considered the major Innovation initiative taken up by the company, there are several other strategies that drive the success at P&G.

- The Corporate Innovation Fund: Corporate Innovation Fund specializes in high-risk, high-reward ideas. It is an internal venture capital firm that creates the initial concept and develops the design, engineering, and the qualification work. Then it manages commercial interesting ideas to the appropriate business units[13].
- Futureworks (www.futureworkspg.com): It is a Corporate New Business Incubation Unit within P&G, with responsibility and resources to create and operate businesses, from idea to scale-up, which involve new categories, new business models, or new capabilities for the Company. It is a platform especially designed for companies that have a fit with P&G and are interested in exploring innovative collaboration opportunities. The FutureWorks team focuses exclusively on innovations that can create a whole new business[2].
- Knowledge management (KM): according to Chris Thoen, director of the Global Innovation Office, "P&G is a company of data. We generate enormous amounts of data but data is just the start. We need a system to capture the knowledge and to make implicit knowledge explicit and to share it. Especially in big companies it is very easy to redo things you have already done". Therefore, they realized that the company had a challenge with the Knowledge Management establishing a clear leadership from the top of the organization according the following lines of development: 1) Creating a vanguard of people charged with kick-starting activities

[13] P&G's Annual Report 2008. www.pg.com/annualreport2008

that bring new opportunities into the organization from outside P&G; 2) Developing training courses to help disseminate the necessary skills through increasing numbers within the organization; and 3) Acquiring and developing KM tools by appointing staff to increase the effectiveness of this effort, such as a set of web based software service that helps increase the involvement of employees in establishing and managing data and personalization of data through RSS feeds of news and business information.

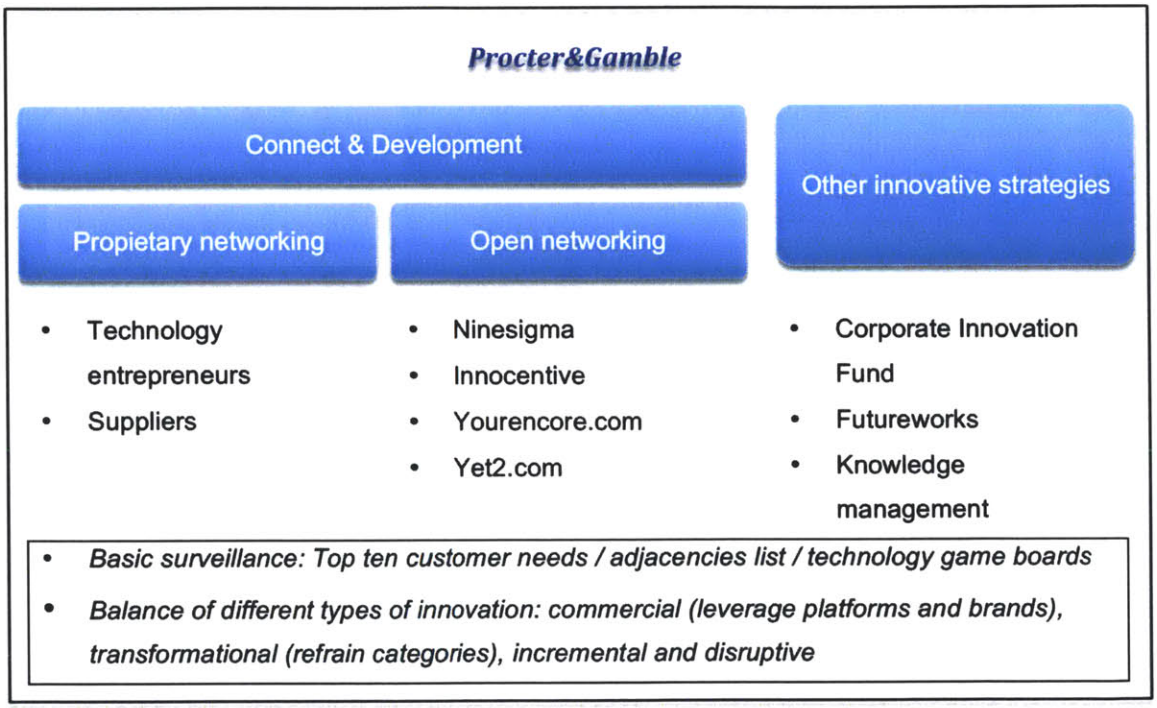

Exhibit 3.4. Procter & Gamble innovative process

Finally, in order to be consistent with its innovation strategy, P&G balances diverse categories of innovation to produce different growth dynamics, focusing in four different types[14]: commercial, sustaining, transformational, and disruptive. Commercial innovation involves leveraging existing equities from superior technology platforms or superior brands. Sustaining innovation brings incremental improvements to existing products (a laundry detergent that cleans just a little bit better or the toothpaste that has a better flavor). The third type of innovation is a subset of sustaining innovation, called "transformational sustaining innovation". Transformational sustaining initiatives reframe

[14] Definitions from P&G's Chief Technology Officer at Procter & Gamble 2010 Annual Meeting.

categories to bring order-of-magnitude improvements and fundamental changes in a business. The fourth innovation type is disruptive market innovation, which creates new markets or segments that represent new-to-the-world opportunities for P&G.

As a conclusion, the outcomes have been remarkable. In the year 2005, R&D productivity increased by nearly 60% and more than 35% of new products in market and it has elements that originated from outside P&G, up from about 15% in 2000. Today, 80% of P&G growth comes from innovation.

3.4 IT Management Software A[15]

This company is a leader in enterprise information technology management software with experience across IT environments from mainframe to cloud. It is a Fortune 500 company and leader in Management Software Vendor[16]. Its strategy is built on core competences in IT management and positioning high-value solutions to its customers business and IT needs for next-generation markets, with focus on cloud computing and SaaS.

Innovation has been one of its core values. Historically, in the years 80'-90's the company built its competences by acquiring companies with 1-2 products in final stage of its lifecycle. Currently, innovation management is developed by a structured method backed by skilled professionals. The innovation structure consists of the balance of 2 perspectives: Corporate view and bottom-up insights. While the Corporate view includes the holistic process, both inorganic innovation and incremental innovation, an employee-based view is about how the development of new ideas allows a company to detect some unarticulated needs.

[15] The interviewees, formed by 2 senior vice presidents and another VP, made the decision to keep company as anonymous because content approval would require getting clearance from their Legal and Communications departments, which may take a long time.
[16] Forrester Research, Inc., "Who's Who in IT Management Software 2.0" by Jean-Pierre Garbani and Thomas Mendel, August 12, 2010. This indication allows clarifying that this company has remarkable outcomes in its industry.

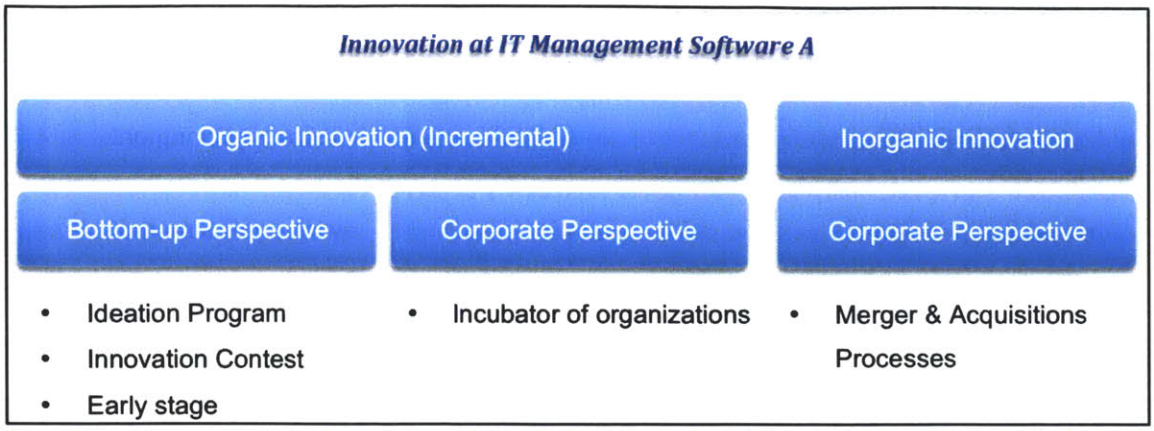

Exhibit 3.5. Innovation Model

Since the Corporate Perspective, three areas are interlaced: Corporate Development Department, Technology Development Department, and Business Department (BD)[17]. The firm starts its process with the development of the corporate strategy and the alignment through Executive management team composed by CEO, Vice Chairman and all the Executive Vice Presidents. This team has a strong internal relationship with more than 2 meetings per month. The strategic planning process is the compass driving the innovation in the company. It works with a deepen scan on market assessment, customer analysis, and emerging technologies. The BD delivers insights to handle and take directions from integrating processes and creating synergies each other. Once the strategic gaps are discovered, decisions are made to follow an organic or acquisition process of technology. The process mainly consists of selection, prioritization, and execution of acquisitions by Merger and Acquisitions (M&A) at Corporate Development Department. As a complementary activity, its Business Incubator develops the exploration of opportunities and exploits businesses in new markets through smaller business units. In both instances, BD explores new ideas while M&A and Technology Development Department execute the vanguard projects. To get successful initiatives, there are champions or sponsors from any business units or corporate level. Within the innovation structure two activities were recently created to improve the innovation ecosystem. First is formation of synergies and the decrease of duplications, such as the usage of common database. It is a key element in the exploitation of IT initiatives and company join forces with the Technology Development Department, which is able to unify concepts and due diligence. The second activity is

[17] Business Department (BD) is formed by all the business units.

related with the performance of activities. A couple years ago, the firm formed a technological think tank as Technical Council, which gives a company an advisory committee as well as a lead user platform for technology scouting.

The bottom-up viewpoint allows the firm incorporating latent innovation. Incremental innovation is the focus of this angle rather than radical innovation, which is managed by the R&D Department. Often employees get feedback from customers on new features to current products and they explore skillfully the ideas to exploit them in the company. Taking advantages of their insights, the firm manages 2 programs: a formal creation idea process and a feedback got from early stage ideas. The first program allows managing new significant ideas as a nurturing process by backing one-to-one, from the formation of the conceptual business to a scalable process within the organization. Therefore, the original idea created by an employee is assessed according to corporate align strategy and technical feasibility to go forward as a business case. If the concept is approved, teams formed by 5-6 employee who as volunteers are going to work in the idea to launch a business pilot. Sometimes, special guests are invited to contribute with the business strategy. The key of the process is the rotation of participants allowing new feedback and insights from outsiders. The second program was created in order to consolidate an earlier stage idea. The process works as an advanced knowledge management. There is an application, which receives ideas from employees, while their peers give feedback to improve them. Sharing ideas with the company community creates a special environment to enrich the ideas with new insights and integration of concepts.

3.5 Comparative analysis of large corporations

The following is a comparative analysis of large corporations based upon the key elements shown in the section 1.5.

	BP	***Cisco***	***P&G***	***IT Management Software A***
Awareness - Strategic Process	+	+	++	+
Value Proposition and Alignment with Strategic Focus	Matchmaker & coach of needs as a service provider. Focus depends on business units.	Symbiotic process between Acquisitions, Incubation and Trainee. Focus depends on needs detected.	Capitalization of internal capabilities & networking innovation (proprietary and open)	Inorganic innovation by acquisition with complementary inside innovation. Consistent strategic planning provided.
Scope of outcomes	Technology providers from suppliers	Create and complement lines of business.	New products or performance old ones	Create and complement lines of business.
Engage leadership	Good	Good	Good	Good
Networking scope	Proprietary networking	No evidence	Open Innovation and proprietary networking	No evidence
Structure and design	+	++	++	+
Innovation teams	Structure similar to a VC company (15 people).	It operates mainly by the Emerging Markets Technology Group (EMTG), with a team of 201 people.	There are 30 in the Open Innovation office and a network of 100 technology entrepreneurs plus networking supplier	No headcount data. Merger & Acquisitions, Technology Development Department, and Business Department (BD).
Commitment of resources	There is a $10 million out of BP's $2.5 billion IT budget—and no formal authority.	No Data	No Data	No fixed budget. Allocation by projects.

	BP	*Cisco*	*P&G*	*IT Management Software A*
Senior Management Support (Support decision making process)	No Data	No Data	No Data	Sponsored by the Executive management team
Issues for implementation	++	++	++	++
Channels for searching innovative ideas	Networking system	Virtuous circle between entrepreneurs from recent acquisitions	Networking system	Flow through Corporate perspective and bottom-up viewpoint
Key resources and activities	Relationship building with the ecosystem is critical to identify emerging technology trends industry-wide. Hence, business units sponsor 50% of investments. On the opposite are are the initiatives to promote a change mindset in the company.	Acquisition unit and ability to retain new key employees. I-Prize contest as an open global innovation competition. Moreover, Action Learning Forum (ALF) is an innovation workshop for executives.	Focus guidelines (1.Top ten consumer needs; 2.Adjacencies; 3.Technology game boards). Extensive networking around the globe. For example, top 15 of its suppliers have an estimated combined R&D staff of 50,000.	Control the duplication of common components. BD explores new ideas and Technology Development Department leads projects according lines of business.
Accountability	++	+	++	?
Streams of outcomes	Evaluate and filter of proposals	Internal contest called I-Prize	Full open innovation system plus additional initiatives (Corporate Innovation Fund & Future Works).	No allocation defined
Control and incentive structure	Performance contract by adopted technologies	No Data	State-gate process and balancing innovation. Two broad goals: Best ideas, wherever they come; and a continuous shift of mindsets away from resistance to "not invented here".	No Data

Exhibit 3.6. Summary of worldwide large corporations

Chapter 4. Insights from developing country companies

This chapter is a study of the Chilean companies with the objective of compare them with the worldwide large corporations reviewed in the previous chapter. Also there are four personal follow up interviews which were made to executives from four companies: Antofagasta Minerals, Movistar Chile, Chilectra, and BCI. These are large Chilean enterprises from Mining, Telecom, Energy, and Banking, respectively. The questions covered the all aspects of a Corporate Entrepreneurship system, including program structure, organizational interfaces, processes, skills, metrics, culture, and leadership.

4.1 BCI

BCI is one of the most important banks in Chile, number three as loans supplier and number four about number of customers. The company has had a remarkable innovative culture for years and has been recognized with important national awards such as "Entrepreneurial innovation", conferred by ACTI[18]in the year 2009. While most of the Chilean banking industry works in a traditional way, BCI has emerged with new business models creating two new lines of development, BCI Nova and T-Banc. BCI Nova is a niche bank focusing on consumer lending, while T-Banc is the e-banking branch of BCI. However, BCI keeps its operations in traditional segments: retail, commercial and investment banking. The main retail products consist of checking accounts, savings accounts, and sight accounts; consumer and mortgage loans, credit cards, and financing services; investment and insurance products; and products for entrepreneurs and small and medium business.

Following a good balance of traditional and non-traditional streams, in 2007, BCI's CEO decided to create the Department of Innovation with the purpose of focusing corporate efforts on developing not only new business models but also vanguard projects in the traditional area of business. Defining the topic as very important, the department was established to support innovative initiatives proposed by a dedicated

[18] ACTI is the Association of Information and Communications Technologies companies (www.acti.cl)

staff in a co-creation model within business units. In terms of organization, BCI has 3 core business units (Commercial banking, Retail banking, and Finance and investment banking) and several support departments (Innovation, Operations, TIC's). Department of Innovation belongs to last one. Its annual budget is US$2M to develop technology projects related to improving profitability, productivity, or quality service.

Currently, the team consists of one Innovation Manager with the backing of one chief and 6 project managers, who are skillful people with Master's degree or Diploma in topics related to technology innovation. Each project manager is responsible for 3-5 initiatives simultaneously, handling a portfolio of 20-30 projects annually. Therefore, capabilities are established to introduce new initiatives through vanguard projects[19], which are referred to as first-of-its-kind projects and enabling the company to enter new markets or introducing new technology to its client portfolio. These vanguard projects are originated based on 3 idea sources. First one is a top-down process, which CEO and General Managers of business units pursue projects based on banking cutting-edge technology or emerging technologies. In addition to this requirement, business units are the second seekers, basing on the customer needs. And the last source is internal ideas coming from technology scouting, which is based on fairs or show-trade events.

The decision-making process is developed like a state-gate method, where there are formal procedures with defined goals and milestones. The portfolio of vanguard projects is screened by business plan analysis in order to look for a Champion of each initiative. The Champion of the business idea, who is mainly a manager in charge of a business unit, acts as sponsor of the initiative and funds 50% of investments to be paid by his or her unit. The rest of the budget is financed by the Department of Innovation. Mainly, innovation teams are encouraged to develop pilots, which construction is outsourced by national or foreign suppliers, and then to be tested in the market. Finally, if the technological solution is successful, there would be a scalable activity performed by a single business unit or corporate-wide, depending on the amount to be invested.

While the Champion is a proper filter for the process, BCI has implemented a formal Innovation Committee, formed by the Chief Executive Officer and General Managers, who monitor the selection of vanguard projects and guarantee their alignment

[19]Concept coined by Frederiksen L. & Davies A. (2008)

with the strategic planning. This committee is mainly concerned about products for Retail Banking. Otherwise, business units screen the initiatives for Commercial or Investment Banking. This "Corporate Follow-up" is specially designed to be quick and effective through track reports and specific meetings. The process is shown in the Exhibit 4.1

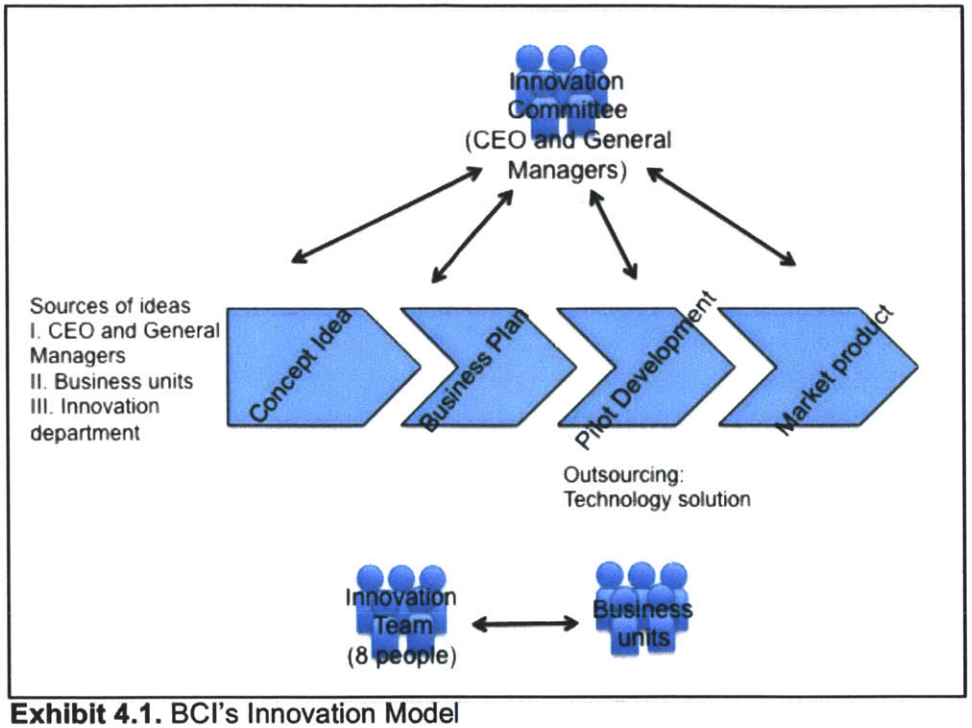

Exhibit 4.1. BCI's Innovation Model

Meanwhile business units and the Innovation Department are dedicated to launch a variety of initiatives; there is a commitment to the innovation culture within the company. Complementary activities for consolidating a mindset change are arranged periodically by the department. It holds annual contests and periodical fairs and sometimes it supports brainstorming activities through workshops for managers of business units.

The process defined above has had very good outcomes. Remarkable initiatives have proven its success. One example is T-Banc, the first Chilean virtual bank, which have a check counting processor, an integrated technology solution for reading and processing checks in automatic teller machines (ATMs). But as the bank has had accomplishments it also has failures, due to a bad market response. For example, before year 2007, in an early stage of the 3-G technology and previous to the introduction of iPhone technology, the bank developed more than 15 apps for each

model of mobile phone, which was a huge task because the smartphone market penetration was less than 0,2% of their customers basis. Although the fast introduction of the wireless technology was well known, the technological complexity of the process was not able to overtake the market threshold and failed in the process

4.2 Antofagasta Minerals

Antofagasta Minerals (AMSA) is a Chilean-based copper mining group which currently operates four mines in Chile: Los Pelambres, Esperanza, El Tesoro and Michilla. Moreover, AMSA has exploration and evaluation of mining feasibility programs in North America, Latin America, Asia and Africa and it has been recognized worldwide by its innovative technology of seawater desalination for Esperanza Mine. It is a unique issue because was the first large scale project using raw seawater in its copper flotation process and implementing deep thickening technology to reuse water from tailings. It processes more than 62,200 m^3/d of seawater which is pumped 145 km to the mine located at 2,200 meters above sea level.

Mining industry has a particular operational model. Most of the mines have to operate independently due to the nature of business: remote location, different operational scales and processes requiring mines to operate autonomously. When AMSA made the decision to create a structure to improve its innovative implementations, a model based on networking structure had to be created to balance the independency of the four mines. In addition, there were differences of strategies and culture between the different subsidiaries, so the mining group created a special unit to catalyze new developments and allows the information flow between mines. The central office was created as a catalyzer unit with 1 PhD and 1 engineer in charge, and the backing of non-exclusive dedication collaborators. The central office was placed in the headquarters but each subsidiary company had networking systems and specific goals: some of them with continuous improvement and other with innovative processes.

Additionally resources and goals were defined to develop a system of nodes and networking attributes (Exhibit 4.2). Frequency and needs of the relationship between them were laid down in order to increase the velocity and efficiency of the

communication. The company nodes were placed in operations department or development one.

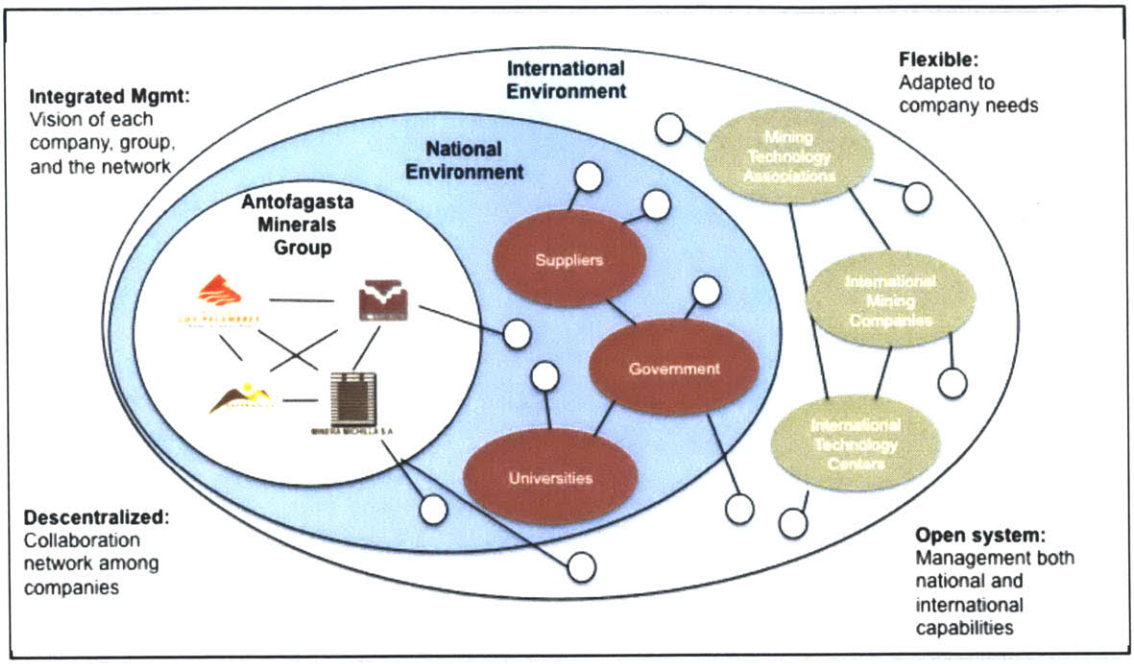

Exhibit 4.2. Networking Innovation System
Source: Antofagasta Minerals

The networking system explained above, allows AMSA having a multi systemic organization with clusters and independent operations. Also some companies have developed their own systems. For example, Pelambres has an exclusive innovation system for bottom-up ideas and performance contracts and policies to promote the development of ideas and implementation of projects. This company designed and implemented an Innovation System of Pelambres (called SIP), which allows the company to manage opportunities of innovation from a bottom-up perspective. First the company defined and prioritized focus in the selection of proposals, a special system allows all the workers to submit for ideas, and an innovation committee with 24 people is responsible for selecting and fostering the development of the projects. As a summary, they have created a portfolio of more than 154 projects already implemented.

Traditionally AMSA has had a good trajectory being efficient in the adaptation and integration of emerging technologies to execute projects, so its core decision-making process is to take the innovation from the market. In general, Mining industry does not have financial constraints to develop vanguard projects but the major challenge

is choosing good projects. Checking various methods, the central office selected the traditional stage-gate process in order to go on or kill projects, and learn from failed initiatives quickly. Indeed, the unit has impact metrics in order to align the innovation process with the mining group's interest, which is informed to the CEO and General Managers.

Regarding Human Resources policies, there are no a unique compensations or incentives system so each business has one according to its particular purposes. For example, Pelambres and Tesoro have started with a performance contract related to "rewards for creativity and ideas".

As a general commentary, mining industry has a capital and labor based business with commodities rather than consumer products. Therefore, competences and capabilities are focused in performance-based innovation. There are between 5 and 6 remarkable mining companies in a concentrated market and due to non-competence agreements there is an obstacle for the development of spin-offs. However there are exceptions. Some companies develop significant technologies, which are launched to the market with a defined focus. Rio Tinto develops technologies that are launched as open source item with the purpose to gain positive reputation[20]. The best example is Tailings Management Project (TMP) of the Iron Ore Company of Canada (IOC) from Rio Tinto, which manages mine tailing to control risk to biodiversity, and uphold company standards for environmental stewardship and responsibility[21].

[20] A similar philosophy is conducted in the BP case, another mining company. Page 43.
[21] "Building biodiversity from tailings" from the website http://www.riotinto.com/SustainableReview/common/pdfs/IOC.pdf

4.3 Chilectra

Chilectra is a Chilean publicly traded power company, dedicated to distribution and sale of electric power. It also operates in foreign markets with electricity distribution concessions in Argentina, Peru, Brazil and Colombia. Spain multinational company Endesa controls Chilectra through subsidiary Enersis.

At the end of year 2004, Chilectra decided to create the Program of Innovation and Sustainability with the purpose to manage and consolidate its strong innovative culture. This unit has a regional scope, coordinating all Latin America subsidiaries. An Innovation manager and 3 people with exclusive dedication take part of the innovation team. Additionally, the program has 30 innovation leaders, all of them professionals with diplomas related to innovation issues, who support the activities of the unit. These leaders have specific roles, such as generator of ideas, conceptualizer of businesses and executor of innovation projects from employees. Finally, there is an innovation committee formed by General Managers, which advices and makes decisions about the project and how it is aligned with the corporate strategy.

Nowadays the program has worked with more than 1000 ideas, creating 20 projects a year and 3-4 annual successful products. There is a continuous process of searching ideas through its own innovation model (Exhibit 4.3). The process has a presentation idea, project profile, business plan, pilot and scalable stage. Most of the projects are not interconnected and are funded by innovation committee with specific budgets. The internal program activities are funded with a fixed annual budget. Follow up reports through meetings are made every month. Intrapreneur, innovation team, innovation leaders and innovation committee take part of them.

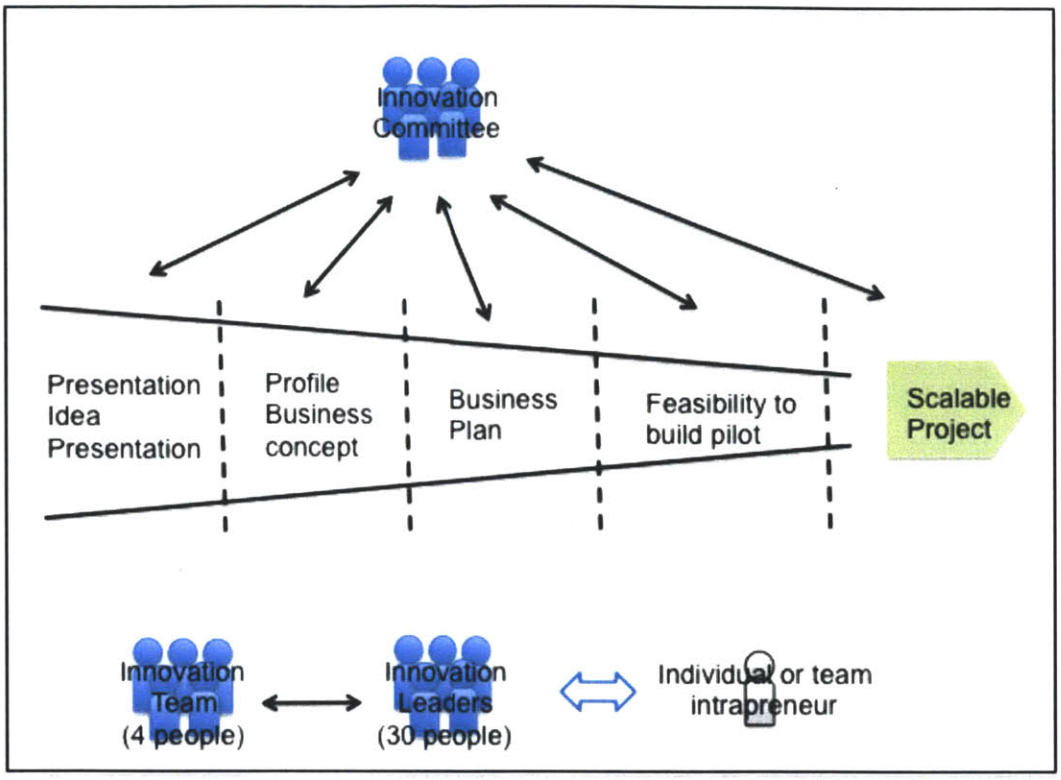

Exhibit 4.3. Chilectra's Innovation Model

On the other hand, Chilectra outsources some innovation initiatives through consulting enterprises with the purpose to develop adjacent businesses. For example, Chilectra and INNSPIRAL[22] designed "Full Electric", a new business model expanding the core business of its traditional electric company. That was when general public perceived natural gas was cheaper than electric power. Therefore, through an emphatic analysis, they realized that the whole system (light, electrical appliances, and high-tech devices) would be backed by charge power in laziest hours (i.e. at night). Additionally, Chilectra signed agreements with government agents to set different prices for apartments into the system. As a whole result, today there are more than 30 thousand homes with using this system in Chile, which are reflected almost 30% of savings in their electric bills.

Together with the development of projects, the program coordinates an annual innovation week with the purpose of encouraging a mindset change and gathering new

[22]INNSPIRAL is a Chilean consulting company dedicated to advise organizations in topics related to innovation (www.innspiral.com).

business ideas. These events allow Chilectra establishing new business concept, and balancing current business exploitation and exploration of new emerging business.

4.4 Movistar

Movistar Chile, a subsidiary of Spanish Telefónica, is a publicly traded telecommunications provider. It offers local, long-distance and international calling services; data transmission; broadband and wireless fidelity (Wi-Fi); terminal equipment sales; and other value-added services. In October 2009, the company put all its communications services together, including mobile telephony, under the brand name of Movistar.

At the same year, inside Marketing Department was formed the Entrepreneurship e Innovation Program. One of the most remarkable initiatives of it was the creation of corporate business incubator "MovistarInnova", an incubator related to information technology field. Movistar's managers realized they had more than 10 million customers in Chile and more than 300 million around the world, and also a complete platform of labor resources (60 product managers and 6,000 collaborators). However, they lacked of the enough flexibility to develop faster products. Therefore, MovistarInnova has the purpose of developing innovation competences in Movistar employees, suppliers and customers. Reasons of Movistar for launching a Corporate Business Incubator were: a. No space to develop in-Company new ideas: b. Company growth based upon only by Core business; c. Customers, Suppliers, Employees and Community demanding to be heard.

Six full-time professionals and 80 support executives form the Entrepreneurship and Innovation Program. This unit has the main function to catalyze innovative ideas inside and outside the company. Each member of the innovation team has a performance contract related to funding rising, billing of start-ups, and launch products in foreign market. Therefore, the key performance indicators follow a direct commitment with the creation of start-ups. The program has a fixed budget for annual contest, while the developments of projects are funded mainly by government grants or private investors.

Generally, the contest receives 2/3 ideas from outside sources and 1/3 from internal employees. The selection process lasts 3 months, which the idea is evaluated under broad criteria such as business potential and alignment with the core business. In a complementary way, entrepreneurs have to participate in workshops related to prototyping (design thinking), business model canvas methodology, and effective presentation techniques. MovistarInnova strongly trains every prospect entrepreneur because its experience shows that no project is viable whether entrepreneur is not motivated and if he or she has not enough capabilities to develop the initiative. In addition, progress reports are presented to an innovation committee composed by CEO and General Managers, in meetings programmed every 2 weeks. Finally, an excellence panel makes the final decision. It is formed by the Chief Executive Officer and General Managers, plus SOFOFA[23] and CORFO[24] executives. Once the idea is approved, the entrepreneur has the possibility to accelerate it business trough a platform installed with product managers and support inside the company.

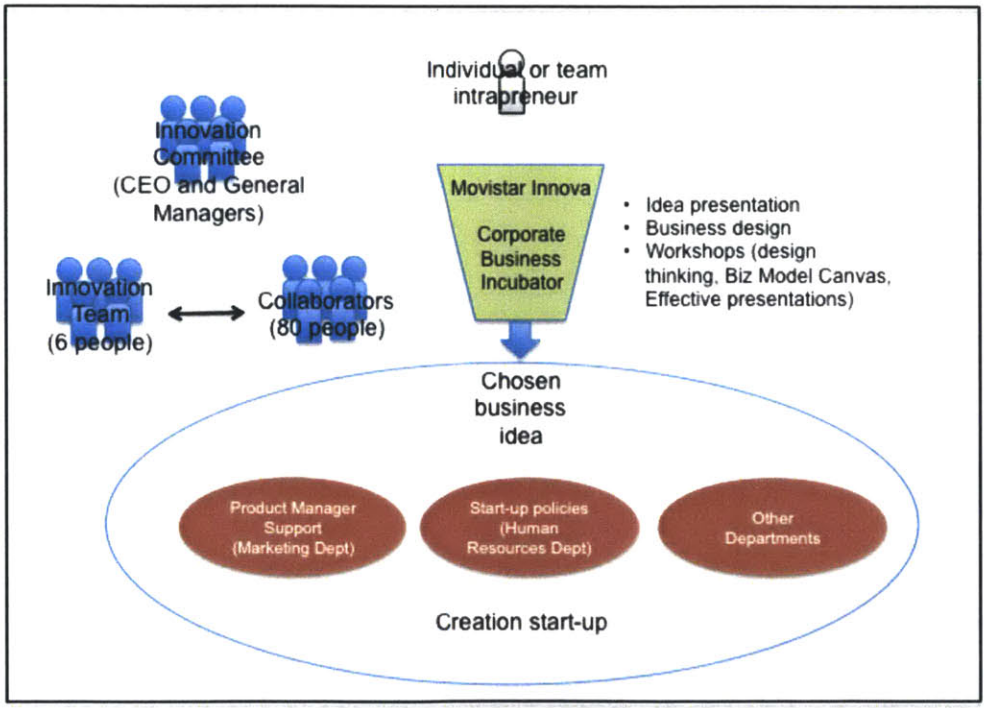

Exhibit 4.4. Movistar's Corporate Business Incubator

[23] SOFOFA is the Federation of Chilean Industry (www.sofofa.cl).
[24] CORFO is the Chilean governmental organization to promote economic growth in Chile. CORFO's main areas are Quality and Productivity, Innovation and Investment Promotion (www.corfo.cl)

One of the main paradigms in top management is "employees could quit in order launching their own business". However, management also knows if employees want to create companies, they leave the company anyway. Therefore, Human Resources department played a strong role in order to allow employee to create start-ups and established procedures related to employee quitting strategy and time commitment policies, which are complementary with trainee programs for innovation support team developed by MovistarInnova.

Finally, this program is related to other Telefónica initiatives, such as Waira. It is the Latin America largest high-tech accelerator (www.waira.org), who covers all Telefónica subsidiaries, including Spain, Argentina, Brazil, Colombia, Chile, México, Peru and Venezuela.

4.5 Comparative analysis of Chilean companies

The following is a comparative analysis of Chilean companies based upon the key elements shown in the section 1.5.

	Antofagasta Minerals	***BCI***	***Chilectra***	***Movistar***
Awareness - Strategic Process	Δ	+	+	+
Value Proposition and Alignment with Strategic Focus	Mainly cost reduction and performance increase by continuous improvement. No relationship with outsider non-focus.	Complete delivery of solutions from newness to performance and cost decrease.	Complete delivery of solutions from newness to performance and cost decrease.	Mainly as a business incubator for projects with high-tech impact. There is no direct correlation with Company vision.
Scope of outcomes	Cost decrease and performance	New solutions for banking	New solutions for Energy Industry and improving channels	New ideas to products
Engage leadership	Good	Good	Good	Good
Networking scope	Proprietary networking	No evidence	No evidence	No evidence
Structure and design	++	++	++	++
Innovation teams	2 engineers (1 PhD) and collaborators.	8 people (1 Manager, 1 chief and 6 project managers, the most with MSc or diploma in tech innovation).	4 people (1 MBA) and 30 innovation leaders, all of them with diplomas.	6 people (1 MBA) and 80 support executives to the selection and training.
Senior Management Support (Support decision making process)	Follow up by CEO and General Managers	Innovation committee for Retail Banking and Business units. Follow up by CEO and Senior Managers	Follow up by Innovation committee (General Managers) every month.	Follow-up by Senior Committee (CEO and senior managers) every 2 weeks.

	Antofagasta Minerals	*BCI*	*Chilectra*	*Movistar*
Commitment of resources	No fixed budget. Allocation by projects.	The annual budget is US$2M	No fixed budget. Allocation by projects.	Fixed budget to contest and the project execution by raising government grants
Issues for implementation	+	+	+	+
Channels of innovative ideas search	Networking system	Top management and business units.	Mainly employees	Outside (1/3 ideas) and internal employees (2/3 ideas).
Key resources and activities	Driving force to activities in continuous improvement. There is an empirical and inclusive approximation (state-gate).	Business plan for ideas. Then, the innovation team creates a pilot. If it is successful, there will be a scalable activity. Mainly business units sponsor projects (50% investments)	Continuous process of searching ideas. The process has a presentation idea, project profile, business plan, pilot and scalable stage. The innovation leaders support generation, conceptualization and execution of ideas from employees.	Annual contest plus outsourcing trainee for competitors. There are workshops to entrepreneurs such as prototyping (design thinking), Business Model Canvas, Effective presentations.
Accountability	Δ -> +	Δ -> +	Δ -> +	Δ -> +
Streams of outcomes	Mainly by vanguard projects. State-gate process	Mainly by vanguard projects	Mainly by vanguard projects	External annual contest
Control and incentive structure	Fixed budget and milestones	Fixed budget and milestones	Fixed budget and milestones	Fixed budget and milestones

Exhibit 4.5. Summary of Chilean companies.

4.6 Insights from Chilean consultants to develop innovation

Most of the companies interviewed indicated they have hired consulting enterprises to support the establishment of innovation systems or the development of specific innovation initiatives. Therefore, this thesis incorporates 5 interviews of consultants specialized in innovation field.

Additionally, it should be useful to companies would like to start Corporate Entrepreneurship Programs have insights from consultants perspective. A sample of companies for each consultant is incorporated in order to measure the impact of their work.

Name, Title	Company sample advised	Advices on good practices	Major issues to warn failures
Patricio Cortés, Center of Entrepreneurship Director, Universidad del Desarrollo	Report "Evaluation and Best Practices in Corporate Spinoff Programs CORFO", an analysis of 5 programs funded by CORFO Chile to develop innovative companies.	• Systematic is a key successful factor. • Company maturity on innovation progress rather than others.	• Lack of innovation outcomes. • Some confusion about concepts (i.e. entrepreneurship, innovation, and spin-off), which deter communication value proposition.
Julio González, Universidad de Santiago	IT companies: Impresión Uno, Deira, Excelsys, Novared, Indra.	• Focusing on ideas to develop in projects. • Generating a sustainable platform.	• Flexibility respect initial schedule.
Eduardo Reyes, Octantis	Movistar, Masisa, Veterquimica, Coca-Cola, Canal13, Petroquim, Merlin Telecom, SODIMAC	• Prestige to work in intrapreneurial initiatives is more remarkable than incentives.	• Communication on value proposition. • Establishing a good outside networking.

Name, Title	Company sample advised	Advices on good practices	Major issues to warn failures
Ivan Vera, Chief Executive at INNSPIRAL	Since 1989 has worked with more than 50 Latin America large enterprises such as VTR, 3M, Arauco, Bayer, Codelco, Endesa, Siemens and Xerox, among others.	• Understanding "Innovation is create value" • Taking advantages of core competences in distribution (i.e. Gasco and public utilities payment)	• Institutional commitment by CEO.
Ximena Gómez, Operations Manager at INNSPIRAL		• Developing project portfolio and commit resources, from idea to pilot. • Intrapreneurs feel indirect benefits to work on innovation projects.	• Idea is not aligned with core products or processes.

Exhibit 4.6. Consulting executives' interview summaries

Chapter 5. Comparative Analysis of elements of Corporate Entrepreneurship Programs

This thesis seeks key elements of Corporate Entrepreneurship Programs to help managers to develop them. Also, it looks for a way, a practical one, to address the creation and deployment of Corporate Entrepreneurship Programs in Latin American firms with a more successful outcome. Because that, a compilation of the research literature advances was studied and it was analyzed both developing country-based companies and large corporations, which facilitate intrapreneurial initiatives.

The process of comparative analysis extracts the key insights from the Chapter 2, 3 and 4 of this document. The information was compiled based on the Road Map from the section 1.5, defined by four categories:

- *Awareness - Strategic Decision Making Process:* it explores the main elements related to define the model, including the corporate strategy and outcomes to develop.
- *Structure and design* seeks: it figures out how the program structure is and the level of integration and interfaces related.
- *Issues for implementation* it is considered as a separated topic in order to know how searching innovative ideas, ways to exploit innovative initiatives and find out complementary activities, such as diffusion and trainee.
- *Accountability* is the final category analyzed with the aim to check the control and incentive structure, as well as methods to take advantages of failed project management.

In order to follow the analysis, two comparative broad-level perspective were done: one from each company studied and then, a deepen analysis of their conclusions. The following table 5.1 summarizes the analysis from prior chapters: 1) figuring-out those elements from the scientific literature, and 2) picking-up the remarkable insights from the analysis of each company.

	Main insights from literature research	*Worldwide Large Corporations*	*Chilean companies*
Awareness - Strategic Decision Making Process			
Value Proposition and Alignment with Strategic Focus	Models of Corporate Entrepreneurship: i. Enabler Model (It designates funding and other support resources aimed to facilitate individuals and internal formed teams); ii. Advocate Model (Central office encourages and orchestrates concept development and formation of new business teams; iii) Producer Model (Focusing in a single, corporate wide, corporate-funded effort. For integrated complex systems mostly). Wolcott and Lippitz (2010).	There are a group of interdependent initiatives in order to get intrapreneurship status.	A central office coordinates the efforts to develop Corporate Entrepreneurship.
	Corporate Entrepreneurship must be analyzed through the strategic perspective (Ireland and Webb, 2007).	Most of them have formal guidelines to align value proposition along with customer needs and products. Some are structured and others are more flexible (P&G, BP). They are heavy users in networking (open and proprietary)	There is no evidence of Strategic alignment.
Scope of outcomes	Variety of forms, from the creation of new ventures by the company called spin-off, to innovative changes in the business model, product and service portfolio; operational improvements of the company, and even mergers and acquisitions to bundle operational synergies. This last issue is not assessed in this document due to its complexity (Morris M.H., van Vuuren J., Cornwall J.R., Scheepers R., 2009).	Broaden spectrum of innovations.	Mainly for complementary services for current products. Lack of outcomes such as acquisitions processes or radical innovation

	Main insights from literature research	*Worldwide Large Corporations*	*Chilean companies*
Networking scope	Need for both networking cultivator and broker roles in network activities for non-routine activity (Kelley, Peters, and O'Connor, 2009). Tapscott & Williams (2006) recommend starting a networking planning process with a comprehensive map of company innovation ecosystem, which positions the creation value and assessing the interdependencies to capture a fraction of them. Nambisan and Sawhney (2007) define four models of innovation based on external networks, distinguished by whether network leadership is centralized or diffused and whether the space for innovation is defined or emergent.	The use of networking is one of the key success factors.	The use of open innovation is limited, even with networking suppliers.
Structure and design			
Innovation teams	Stevenson (1999) distinguished two general types of managerial approaches within firms: the trustee and the promoter. The promoters are opportunity-driven, and pursue opportunities regardless of resources currently under control. Moreover, Hornsbya at al. (2000) declare that middle management is formed by proper managers because their primary job responsibility is monitoring activities of subordinates and reporting to upper management.	Teams are composed in a variety of structures.	Innovation management units with less than 10 people mostly.
Senior Management Support (Support decision making process)	Cea, Sanhueza, and Taraoka (2011) encourage the existence of broaden support entities (sponsor, support team, and innovation team) to facilitate the intrapreneurial ideas.	There is no evidence that Senior managers have a follow-up process about Innovation teams.	Well-organized sponsored teams with the commitment of CEO and top managers. It may be due to the early stage of the unit.

	Main insights from literature research	*Worldwide Large Corporations*	*Chilean companies*
Commitment of resources	Morris, Schindehutte, and Allen (2006) conclude that a balanced approach to tightness-looseness resource produces the highest levels of entrepreneurship in organizations.	The fixed budget is used for diffusion and pilot projects. Although there is no evidence to develop radical innovation, there is a strong resource commitment from business units to develop incremental innovation.	It works mainly in vanguard projects; hence there is no fixed budget. Resources are limited for these kinds of activities yet.
Issues for implementation			
Channels of innovative ideas search	The best insight is the use of strategic entrepreneurship alignment between Corporate Strategy and Entrepreneurship. Rather than a shift in mindset of the firm's decision makers, implementing strategic entrepreneurship involves changes in the firm's structure, culture, and operations in order to pursue new ideas. (Ireland and Webb, 2009). On the other hand, Azadegan and Wagner (2011) prove an indirect association between Industrial Upgrading (IU) and explorative innovation performance.	Networking system is strongly used as support way to search innovative ideas. The generation of ideas is from both innovation competition and venture projects.	There is no evidence of a formal structure to pursue new ideas. Mainly employees are who search or create innovative initiatives. There are some exceptions.
Vanguard projects by pilot's initiatives.	Brady and Davies (2004) and Frederiksen and Davies (2008) identify and recommend, "vanguard projects" as the initiatives to move away from a firm's core business activities and to diversify into a new market or technology base. They are extensively used in large companies (Ireland and Webb, 2007).	The Corporate entrepreneurship is worked by vanguard projects, from pilots to market launching.	The work for vanguard projects is strong but there is not a previous searching process of guidelines to innovate.
Diffusion	There is no scientific evidence about how to manage the diffusion. However, a good approach might be delivered by the Knowledge management (O'Dell, 2011).	There are diffusion activities to change mindset in the company. However, there is no formal system to work the Knowledge management.	There is no evidence about an extensive diffusion, which is focused mainly in intrapreneurs.

	Main insights from literature research	*Worldwide Large Corporations*	*Chilean companies*
Trainee	There is no scientific evidence about trainee process; hence it will be checked by company systems.	Some companies have a formal system (e.g. workshops for top executives) to enable innovation for middle managers.	There is good trainee for innovation team and some intrapreneurs. However, there is no evidence on senior and middle managers trainee.
Balancing new ideas with exploitation of innovation	Ireland and Webb (2007) suggest 3 key actions that positively contribute to firms' efforts to achieve a better balance: i. Understanding of the balance (for example, 50/50), ii. Balance between external and internal analysis: iii. Middle manager as a significant player to manage the exploitation.	A good approach is business unit buy-in in the early stage.	The use of sponsored teams allows them to have a good balance. But at the early stage, there is no strong evidence of having a good balance yet.
Accountability			
Control and incentive structure	Goodale at al. (2010) suggests that managers should understand innovation as a structured and disciplined process. Collins (2001) says the "freedom within a framework" and "opportunistic flexibility," where policies and procedures serve as boundaries to guide and optimize entrepreneurial efforts.	Mainly made by performance contract with business units sponsor rather than innovative activities by itself.	Fixed budget and milestones. With the exception of Movistar, there is no evidence of policies or procedures to encourage intrapreneurship.
Failure management	Shepherd et al (2009) identifies the importance of embrace a portfolio approach to redefine concepts of failure in more psychologically and organizationally productive ways. A second attribute is the copy of self-efficacy procedures among individuals. Therefore, the Knowledge Management discipline contributes as diffusion as failure management.	Due there is no an extensive Knowledge management procedures, there is no evidence of failure management neither.	The evidence shows the accumulation of failed project experience but there is no a formal system developed.

Exhibit 5.1. Comparative analysis in research literature, large corporations and Chilean companies.

Chapter 6. Conclusions

Nowadays companies should face transformation through innovative initiatives in order to start developing new business opportunities. The objective of this thesis is delivering a preliminary structure to be considered by managers to create Corporate Entrepreneurship Programs.

6.1 Challengers for Chilean organizations

In summary, multinational companies have several viewpoints to face Corporate Entrepreneurship and their employees manage in a professional and systematical way. Therefore the following are the most significant recommendations for Chilean organizations[25].

Awareness - Strategic Decision Making Process

- Chilean organizations do not have several interdependent units linked between themselves to develop innovative initiatives. They operate with only one or two. So they should develop several initiatives in order to have a better portfolio management. Good examples are Cisco and P&G, who develop several initiatives at the same time.
- The alignment with the corporate strategy is a must for these kinds of units. Some firms are aligned properly with the strategy meanwhile others have follow-up guidelines. One emblematic case is Procter & Gamble, which has 3 guidelines focus: 1.Top ten consumer needs; 2.Adjacencies; and 3.Technology game boards.
- Most of the Chilean companies have had a kind of incremental innovation, mainly as complementary services and new markets exploration. There is no evidence of company's acquisition process or development of radical innovation. Therefore, it should be recommended to deepen on new other ways to innovate.

[25] Although the document is prepared for Chilean organizations, it might be used for Latin American firms or whoever that would like to create a Corporate Entrepreneurship Program.

- There is no evidence of development of platforms of open innovation and proprietary networking to pursue better outcomes with the support of supplier and direct customers.
- All of Chilean companies analyzed have a committed senior management. Special attention should be given to entrepreneurial culture and the role of top managers, according to Chilean related literature[26].

Structure and design

- In general, the teams are good structured and they have received specialized trainee. The support of consulting companies to develop innovation and Associations of Enterprises (SOFOFA, ACTI) allowed them to develop proper structure in an early stage. However, they are a homogeneous approach, which could be a threat at the same time.
- The importance of the role of senior manager cannot be understated, so for these companies the support of council of top managers is recommended.
- The evidence shows that Chilean companies have limited resources and they are used for pilot construction. Although it could be a weakness, large corporations also have kept reduced teams in order to handle sponsorship and buy-in of business units.

Issues for implementation

- The use of vanguard projects through pilots is a common practice but companies have to define proper milestones and outcomes. Also, a business unit or a specialized unit manages the development of products.
- Diffusion to get a change of executives' mindset is a strong recommendation, with special attention focused in middle managers, who have a profile of promoters of new ideas. Formal trainee such as CISCO workshops for top managers and middle managers is a good example to be considered.
- The balance between exploitation and exploration of ideas has to be considered. Several companies may suffer of accumulation of good ideas without later development.

[26] Cortes P., and Bastias A., 2010. Reporte Técnico: Evaluación y Mejores Prácticas Plataformas CORFO de SpinOff Corporativo. Project Progress "Análisis de la situación del emprendimiento corporativo en Chile". Funding: CORFO Chile, July 2011.

Accountability

- Understanding the creation and development of these programs as a disciplined and systematic process. It allows using the creativity with a framework of policies and procedures.
- Knowledge management is a powerful tool for failed project portfolio management in order to take advantage of them and make a copy of self-efficacy procedures.

6.2 Final issues to consider: What to learn from each other

The most important conclusion is these programs could be both disciplined and flexible. The statement "develop innovation with framework and consistency" is a strong recommendation to be considered. Adopting a consistent process of portfolio management and using current resources could be considered a complication when managers receive freedom to create new initiatives. However, a program with policies and procedures serves as guiding boundaries optimizes entrepreneurial efforts and allows taking advantage of every resource to the company. Working with employees who have experience as entrepreneur, development of performance contracts and human resources policies are recommendations in order to achieve better outcomes.

Along with creation of flexible and consistent frameworks, a second significant issue is the alignment with the corporate strategy. Management practices should be fit with each other and the starting point has to be the strategy of the firm. Strategic flexibility is important as well, and some organizations have developed feedback guidelines in order facing and adapting to changing business conditions. However, there is no evidence that one or another is better. Following one of them should achieve same outcomes: broaden corporate analysis on market assessment, customer analysis, and the scan of emerging technologies. Once established the basis, most of the time, the alignment is lead by committees to be coherent with the exploitation of current business.

Sponsorship of top management and commitment of resources from business units are acid tests to pass in order to develop value-based initiatives for the company. In addition, middle managers support is a driving factor to be managed. Implementing practices in isolation could be counterproductive to these kinds of programs and the

monetary and non-monetary commitment of business units is strongly recommended. Developing performance contracts on innovation teams and business units pursue to control and check the innovation works properly. Moreover, successful companies show senior leaders should be involved in the development and implementation of new products. Yet, this involvement needs to be partial because scientific evidence has concluded that middle managers have enough capabilities of handling the creation of new products.

Throughout this thesis, some disciplines were discovered as insights to empower the Corporate Entrepreneurship. Although there is no evidence of a lack of effective systems for diffusion and training, companies were emerging with structured and formal programs for corporate leadership, which involved the development of new businesses. In addition to these specialized centers, knowledge management emerged as toolkit to recognize and embrace prior statement. Furthermore, the need of exploration of innovation is being supported with the use of networking. Both open innovation and networking proprietary systems were powerful processes, which work on alternative ways to deepen in the development of the ideas.

Finally, issuing a statement must be noticed. Although due to restricted sample of companies the presented work could have a limited scope, the development of a deepen analysis of scientific literature supports the conclusions of this thesis. However, it can be followed up with additional work in several directions. To scientifically prove the roadmap, a robust scientific study must follow it and explore each of the topics and key elements in more detail. Also, the quality of companies have to be studied through finding an optimum combination of depth and breadth in term of kinds of outcomes, disciplines covered, and toolkits managed. Third, in terms of insights from emerging countries, the validation of outcomes of non-Chilean companies may collaborate in the recommendations to start Corporate Entrepreneurship programs.

Bibliography

Scientific literature and books:

Allen, T., & Henn, G. (2007). *The Organization and Architecture of Innovation: Managing the Flow of Technology*. Burlington, MA: Elsevier Inc.

Azadegan, A., & Wagner, S.M. (2011). Industrial upgrading, exploitative innovations and explorative innovations. *International Journal of Production Economics, 130 (2011),* 54–65.

Block, Z., & MacMillan, I. (1995). *Corporate venturing: Creating new business within the firm*. Boston, MA: Harvard Business School Press.

Brady, T., & Davies, A. (2004). Building project capabilities: from exploratory to exploitative learning. *Organization Studies, 25 (2004),* 1601–21.

Boulding, W., & Morgan, R. (1997). Pulling the plug to stop the new product drain. *Journal of Marketing Research 34 (1997)*, 164–176.

Burgelman, R.A. (1983). Corporate entrepreneurship and strategic management: Insights from a process study. *Management Science, 29 (1983)*, 1349–63.

Cea, R., Sanhueza, D., & Taraoka, T. (2011). *Innpractice Guideline, Nuestros avances en emprendimiento*. Santiago, Chile: Redes de Innovación Ltda.

Collins, J. (2001). *Good to Great: Why Some Companies Make the Leap... and Others Don't*. New York, NY: HarperCollins.

Dyer, J., Kale, P., & Singh, H. (2004). When to Ally and When to Acquire, *Harvard Business Review, 82 (2004)*, 109-115

Frederiksen, L., & Davies, A. (2008). Vanguards and ventures: Projects as vehicles for corporate entrepreneurship. *International Journal of Project Management, 26 (2008),* 487–496.

Ghemawat, P. (2002). Competition and business strategy in historical perspective. *Business History Review, 76 (2002)*, 37 – 74.

Goodale, J.C., Kuratko, D.F., Hornsby, J.S., & Covin, J.G. (2011). Operations management and corporate entrepreneurship: The moderating effect of operations control on the antecedents of corporate entrepreneurial activity in relation to innovation performance. *Journal of Operations Management 29 (2011)*, 116-127.

Hayton, J. C. (2005). Promoting corporate entrepreneurship through human resource management practices: A review of empirical research. *Human Resource Management Review 15 (2005)*, 21–41.

Huston, L., & Sakkab, N. (2006). Connect and develop. Inside Procter & Gamble's new model for innovation. *Harvard Business Review, 84 (2006)*, 58-66.

Hornsby, J. S., Kuratko, D. F., Shepherd, D. A., & Bott, J.P. (2009). Managers' corporate entrepreneurial actions: Examining perception and position. *Journal of Business Venturing 24 (2009),* 236–247.

Hornsby, J. S., Kuratko, D. F., & Zahra, S. A. (2000). Middle managers' perception of the internal environment for corporate entrepreneurship: assessing a measurement scale. *Journal of Business Venturing 17 (2002),* 253–273.

Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). A model of strategic entrepreneurship: The construct and its dimensions. *Journal of Management 29 (2003)*, 963–989.

Ireland, R. D. & Webb, J. W. (2007). Strategic entrepreneurship: Creating competitive advantage through streams of innovation. *Business Horizons 50 (2007)*, 49—59.

Ireland, R. D. & Webb, J. W. (2009). Crossing the great divide of strategic entrepreneurship: Transitioning between exploration and exploitation. *Business Horizons 52 (2009),* 469—479.

Jefferson, G., & Rawski, T. (1994). Enterprise reform in Chinese industry. *Journal of Economic Perspectives, 8(2)*, 47–70.

Kantis, H., & Drucaroff, S. (2009). *Emprendimiento corporativo en América Latina: conceptos, lecciones de la experiencia coreana y plataforma estratégica para su desarrollo en la región*. Washington, DC: Inter - American Development Bank.

Kelley, D. J, Peters, L., & O'Connor, G. C. (2009). Intra-organizational networking for innovation-based corporate entrepreneurship. *Journal of Business Venturing 24 (2009),* 221–235.

Liu, S., Luo, X., & Shi, Y. (2002). Integrating customer orientation, corporate entrepreneurship, and learning orientation in organizations-in-transition: an empirical study. *International Journal of Research in Marketing 19 (2002)*, 367–382.

McGrath, R.G., Keil, T., & Tukiainen T. (2006). Extracting value for corporate venturing. *MIT Sloan Management Review 48 (2006)*, 50–56.

Miles, M.P., Paul, C.W., & Wilhite, A. (2002). Modeling corporate entrepreneurship as rent-seeking competition. *Technovation 23 (2003),* 393–400.

Morris, M. H., Schindehutte, M., & Allen, J. (2006). Balanced control systems as a mechanism for achieving corporate entrepreneurship. *Journal of Managerial Issues, 18(4)*, 468—495.

Morris, M. H., van Vuuren, J., Cornwall, J.R., & Scheepers, R. (2009). Properties of balance: A pendulum effect in corporate entrepreneurship. *Business Horizons 52 (2009)*, 429—440.

Morris L. (2011). *The Innovation Master Plan: the CEO's guide to innovation*. Walnut Creek, CA: Innovation Academy.

Nambisan, S., & Sawhney, M. (2007). *The Global Brain: Your Roadmap for Innovating Faster and Smarter in a Networked World*. Upper Saddle River, NJ: Prentice Hall.

Nielson, R.P., Perters, M.P., & Hisrich, R.D. (1985). Entrepreneurship strategy for internal markets-corporate, non-profit and government institution cases. *Strategic Management Journal, 6 (1985),* 181-189.

O'Dell, C. (2011). *The New Edge in Knowledge: How Knowledge Management Is Changing the Way We Do Business.* Hoboken, NJ: John Wiley & Sons, Inc.

Pinchott, G.P. (1985). Intrapreneurship. New York, NY: Harper & Row.

Project Management Institute (2008). *The Standard for Program Management.* Newtown Square, PA: Project Management Institute Inc.

Sharma, P., & Chrisman, J.J. (1999). Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship Theory Practice 23 (1999),* 11-27.

Shepherd, D.A. (2003). Learning from business failure: propositions about the grief recovery process for the self-employed. *Academy of Management Review 28 (2003),* 318–329.

Shepherd, D. A., Covin, J. G., & Kuratko, D. F. (2009). Project failure from corporate entrepreneurship: Managing the grief process. *Journal of Business Venturing 24 (2009),* 588–600.

Srivastava, A., & Lee, H. (2005). Predicting order and timing of new product moves: the role of top management in corporate entrepreneurship. *Journal of Business Venturing 20 (2005),* 459–481.

Stevenson, H. (1999). *A perspective on entrepreneurship.* In Sahlman W., Stevenson H., Roberts M., & Bhide A. *The Entrepreneurial Venture (pp. 10-12).* Boston, MA: Harvard Business School Press.

Tapscott, D., & Williams, A. (2010). *Wikinomics: How Mass Collaboration Changes Everything.* New York, NY: Penguin Group.

Von Hippel, E. (1994). *The Sources of Innovation*. New York, NY: Oxford University Press.

Von Hippel, E. (2005). *Democratizing Innovation*. Cambridge, MA: MIT Press.

Wolcott, R. C. & Lippitz, M. J. (2007). *BP's Office of the Chief Technology Officer: Driving Open Innovation through an Advocate Team.* Evanston, IL: Kellogg School of Management, Northwestern University.

Wolcott, R. C. & Lippitz, M. J. (2010). *Grow from within Mastering Corporate Entrepreneurship and Innovation.* Columbus, OH: McGraw-Hill.

Zahra, S. A., Filatotchev, I., & Wright, M. (2008). How do threshold firms sustain corporate entrepreneurship? The role of boards and absorptive capacity. *Journal of Business Venturing 24 (2009)*, 248–260.

Zhang, Z., Wan, D., & Jia, M. (2009). Do high-performance human resource practices help corporate entrepreneurship? The mediating role of organizational citizenship behavior. *Journal of High Technology Management Research 19 (2008)*, 128–138.

White papers and literature from Internet:

Corporate Information retrieved from website:

British Petroleum Corp www.bp.com

Cisco Corp www.cisco.com

Procter & Gamble www.pg.com and www.pgconnectdevelop.com

Antofagasta Minerals www.antofagasta.co.uk

Bank BCI www.bci.cl

Chilectra www.chilectra.cl

Movistar www.movistarinnova.cl

A.T. Kearney (2011). *Global Services Location Index™ 2011.* Retrieved from http://www.atkearney.com/index.php/Publications/global-services-location-index-gsli.html

Brown B. (2010). Why innovation matters: Procter & Gamble has long been known for its focus on innovation. Keynote address at the 2010 Annual Meeting by P&G's Chief Technology Officer. Retrieved from http://findarticles.com/p/articles/mi_6714/is_6_53/ai_n56199782/

Cisco (2007). *How Cisco Applies Companywide Expertise for Integrating Acquired Companies.* Case study retrieved from http://www.cisco.com/web/about/ciscoitatwork/downloads/ciscoitatwork/pdf/Cisco_IT_Case_Study_Acquisition_Integration.pdf

Cisco (2010). Key Cisco employee stays connected to corporate from Texas with Cisco TelePresence Solution. Case study retrieved from http://www.cisco.com/en/US/prod/collateral/ps7060/ps8329/ps8330/ps7073/prod_case_study0900aecd8054c81b.html

Cooper, R. G., & Scott, J. E. (2003). *Benchmarking Best Practices Performance Results and the Role of Senior Management.* White paper Nª 32 retrieved from www.stage-gate.com/knowledge.php

Cortés, P., & Bastías, A. (2010). *Reporte Técnico: Evaluación y Mejores Prácticas Plataformas CORFO de SpinOff Corporativo.* In Project Report "Análisis de la situación del emprendimiento corporativo en Chile". Funding: CORFO Chile, July 2011.

Chile Government (2011). *IDD or Indice de Desarrollo Digital (Digital Development Index).* Retrieved from http://www.observatoriotic.gob.cl/documento/idd-indice-de-desarrollo-digital-de-chile

Innspiral (2004). *Full Electric.* Case study developed by consulting company Innspiral for Chilectra. Retrieved from http://www.innspiralmoves.com/en/cases/full-electric

Innspiral (2009). *Minera Los Pelambres.* Case study Developed by consulting company Innspiral for Minera Los Pelambres, Antofagasta Minerals. Retrieved from http://www.innspiralmoves.com/en/cases/minera-los-pelambres

Lippitz, M.J., & Wolcott, R.C. (2011). *The Innovation Model Behind Cisco's Success* Posted December 2, 2011. Retrieved from http://articles.businessinsider.com/2010-12-02/strategy/30069561_1_cisco-innovation-information-technology#ixzz1f3gygXTu

Thoen, C. (2011). *Procter and Gamble's managing director of the Global Innovation Office.* Retrieved from http://www.innovationmanagement.se/2011/04/21/procter-and-gambles-chris-thoen-on-open-innovation/

Weiss, M. & Smith, H. (2007). *Leveraging Emerging Digital Technology at BP.* Advanced Practices Council (APC) of the Society for Information Management (SIM), University of Minnesota 92 MIS Quarterly Executive Vol. 6 No. 2. Retrieved from http://www.simnet.org/resource/group/0F59E34E-CD05-4889-AAD6-7C2891934489/documents/apcforum_darukhanavala.pdf

Interviews

Briceño, N., Innovation Engineer at Antofagasta Minerals, personal communication in Chile, June 8th, 2011.

Cortés, P., Director of Center of Entrepreneurship at Universidad del Desarrollo, personal communication in Chile, May 4th, 2011.

Cousiño P., Innovation Manager at BCI, personal communication in USA, June 8th, 2011.

Frangos C., Director of Center of Collaborative Leadership at CISCO, personal communication in USA, November 4th, 2011.

Gómez X., Operations Manager at INNSPIRAL, personal communication in Chile, July 12th, 2011.

González, J., Professor of Universidad de Santiago de Chile, personal communication in Chile, July 7th, 2011.

Martínez, J. C., Innovation and Entrepreneurship Director at Telefónica Chile, personal communication in Chile, June 13th, 2011.

Salas, J. C., Innovation Manager at Antofagasta Minerals, personal communication in Chile, June 8th, 2011.

Reyes, E., Coordinator of Corporate Entrepreneurship Platform at Octantis, personal communication in Chile, July 11th, 2011.

Senior vice president of M&A at IT Management Software A personal communication in USA, November 14th, 2011.

Senior vice president of R&D at IT Management Software A, personal communication in USA, October 14th, 2011.

Tapias, P., Chief of Innovation at BCI, personal communication in USA, June 8th, 2011.

Vera, I., Chief Executive at INNSPIRAL, personal communication in Chile, August 2nd, 2011.

Vice president of Innovation at IT Management Software A, personal communication in USA, November 4th, 2011.

Zalaquett, J.P., Innovation Manager at Chilectra, personal communication in Chile, June 14th, 2011.