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IN SEARCH OF CORPORATE RENEWAL:
How to Benefit from Corporate Venturing?

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ABSTRACT

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Despite the rapid change in today's business environment there are relatively few studies about corporate renewal. This study aims for its part at filling that research gap by studying the concepts of strategy, corporate renewal, innovation and corporate venturing. Its purpose is to enhance our understanding of how established companies operating in dynamic and global environment can benefit from their corporate venturing activities.

The theoretical part approaches the research problem in corporate and venture levels. Firstly, it focuses on mapping the determinants of strategy and suggests using industry, location, resources, knowledge, structure and culture, market, technology and business model to assess the environment and using these determinants to optimize speed and magnitude of change. Secondly, it concludes that the choice of innovation strategy is dependent on the type and dimensions of innovation and suggests assessing market, technology, business model as well as novelty and complexity related to each of them for choosing an optimal context for developing innovations further. Thirdly, it directs attention on processes through which corporate renewal takes place. On corporate level these processes are identified as strategy formulation, strategy formation and strategy implementation. On the venture level the renewal processes are identified as learning, leveraging and nesting. The theoretical contribution of this study, the framework of strategic corporate venturing, joins corporate and venture level management issues together and concludes that strategy processes and linking processes are the mechanism through which continuous corporate renewal takes place.

The framework of strategic corporate venturing proposed by this study is a new way to illustrate the role of corporate venturing as a purposefully built, different view of a

company's business environment. The empirical part extended the framework by enhancing our understanding of the link between corporate renewal and corporate venturing in its real life environment in three Finnish companies: Metso, Nokia and TeliaSonera. Characterizing companies' environment with the determinants of strategy identified in this study provided a structured way to analyze their competitive position and renewal challenges that they are facing. More importantly the case studies confirmed that a link between corporate renewal and corporate venturing exists and found out that the link is not as straight forward as indicated by the theory. Furthermore, the case studies enhanced the framework by indicating a sequence according to which the processes work. Firstly, the induced strategy processes strategy formulation and strategy implementation set the scene for corporate venturing context and management processes and leave strategy formation for the venture. Only after that can strategies formed by ventures come back to the corporate level – and if found viable in the corporate level be formalized through formulation and implementation.

With the help of the framework of strategic corporate venturing the link between corporate renewal and corporate venturing can be found and managed. The suggested response to the continuous need for change is continuous renewal i.e. institutionalizing corporate renewal in the strategy processes of the company. As far as benefiting from venturing is concerned the answer lies in deliberately managing venturing in a context different to the mainstream businesses and establishing efficient linking processes to exploit the renewal potential of individual ventures.

Keywords: strategy, innovation, corporate venturing, corporate renewal

UDC 65.021.65 : 001.895

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This study is a result of a four year journey in the academic world, my entry to which was more a matter of coincidence than a deliberate choice. I was offered the opportunity to dedicate time to studying when my husband was offered a job in Rio de Janeiro, Brazil. Being a mother of then two small children I chose to stay at home with them and to engage in doctoral studies to balance the overwhelming task of motherhood. Looking back it was a good choice: during these four years I have learned a lot. Not only about the topic of my studies, but also about being a mother (of now three children) and about myself.

Now when the majority of work is behind me, I take the opportunity to thank a number of people whose guidance and help during the past years has been of great importance and influenced the end-result tremendously.

Firstly, there is Professor Tuomo Kässi from Lappeenranta University of Technology whom I thank for the continuous support. Our cooperation worked very well despite of the great geographical distance. Tuomo provided me with prompt feedback and asked the right questions at the right sequence. I would have been lost many times, if he had not taken the time to guide the journey.

Secondly, there are a number of people in Nokia, Metso and TeliaSonera that I am grateful to. In Nokia, I thank Jaakko Myllymäki who supported me by buying books and helped me to get started with the empirical part by introducing me to Mikko Kosonen who for his part provided me with valuable insights to the topic. I also thank Markus Kajanto and Jukka Nihtilä for their comments to numerous versions of the thesis. In addition, I thank Ossi Kuittinen from TeliaSonera and Mauri Jaakonaho and Juhani Kyytsönen from Metso for the access to data and for their comments to the thesis.

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I chose to engage in academic research without knowing exactly what it was all about but committed to work hard. I am grateful to my parents, Harri and Hilkka, who among other things brought me up to believe that hard work does pay off. I also thank my husband, Kim, who was there for me, encouraging me and convincing that the work was worth continuing when I was having doubts. Last but not the least there are my three children, Ella (7), Karin (5) and Linda (3), who did not quite understand what mom was doing when she was studying but however accepted it. They did show me the value of looking things differently and the value of asking the same question until the answer feels right.

In my case, like in many others, it seems that the journey is more important than the destination. Now when this part of the journey is behind me, I look forward to new challenges – academic, professional and personal.

Rio de Janeiro, September 2005

Sari Kola-Nyström

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1 Introduction

1.1 Finding the research problem

Today, the business environment in which companies operate is described as rapidly changing regardless of the business. Uncertainty and ambiguity related to the range of opportunities available make it difficult to make strategic decisions. It appears that companies need to be increasingly flexible to respond to changing conditions. While change in the business environment may be constant, the question rises if a company can be in a state of constant change?

Working in a constantly changing organization, Nokia Networks, got me interested in change and corporate venturing. As a Marketing Manager I was involved with a project which originated as a venture, was transferred to the mainstream business, then back to the venturing unit and again back to the mainstream business. Customers had great interest towards the solution – and yet it did not become a commercially viable product. On the way enthusiasm about the solution from the part of the project team turned into defensiveness. From the part of the mainstream business the approach appeared to be close to "don't mess with our business".

What happened? What made a project that seemed to have great potential to fail? What would have been needed to make it succeed? There seemed to be my research problem: change driving the decision to venture – and the mechanisms needed to capture the benefits of it.

1.2 Change and established corporation

According to the recent literature, companies are challenged by changing markets, a tidal wave of rapidly developing technologies and a need to develop new business models that enable them to benefit from their changing business environment. The conclusion is that change appears to be constant which in turn is leading to the need to institutionalize it. Today, companies need to build the organizational capabilities to proactively respond to

change, to identify opportunities as they emerge and to exploit them better than their competitors do.

Institutionalizing change calls for ability for continuous corporate renewal which has been identified as an important determinant of the success of a company (Brown & Eisenhardt, 1998, D'Aveni, 1994, Hamel, 2000). The need for continuous corporate renewal appears to be driven primarily by:

- New market opportunities emerging as a result of converging industries and emerging technologies which can cause sudden changes in the competitive situation. According to D'Aveni (1994) market stability is threatened by short product life cycles, short product design cycles, new technologies, frequent entry of unexpected outsiders, repositioning of incumbents and radical redefinitions of market boundaries as diverse industries merge.
- Development of new technologies related to material sciences, energy systems, electronics, information sciences, biosciences, manufacturing, and engineering services and the communication revolution (Merrifield, 1993). Internet technologies play a key role because they enable rapid diffusion of information and distributed use of workforce, reduce transaction costs for search, contracting and coordination, and are thus opening opportunities to build new business models (Tapscott et al., 2000).
- Development of new business models that enable companies to maximize their share of an increasing number of possible directions available through co-operation (Baradacco, 1991, Doz & Hamel, 1998, Dussauge & Garette, 1999, Tidd et al, 2001)

This study highlights the importance of finding markets, technologies and business models that provide the greatest potential for a company. It suggests that in achieving that strategy for and active management of innovation is needed.

Change is of interest of this study, particularly change taking place in the context of an established corporation. There are numerous examples of successful companies that have

failed to respond to change and therefore lost their position in the marketplace (Christensen, 1997, O'Reilly & Tushman, 2004, Tidd et al., 2001, Tushman & O'Reilly, 1996, 1997, etc.). Established companies seek to respond to change by trying to sustain innovation and growth – an attempt in which corporate venturing can play a significant role (Burgelman, 1988, Chesbrough, 2002, Chesbrough & Socolof, 2000, Dickman et al., 2002, Tidd & Taurins, 1999).

Taken the investments into corporate venturing the question arises of whether companies are harvesting the desired benefits. The value added from the venturing process seems to depend on the strategic context of the corporation and the management of the corporate ventures in this context (Tidd & Taurins, 1999, MacMillan & George, 1985, Burgelman, 1983). While many large companies have demonstrated excellence in corporate entrepreneurial practices (Barrett & Weinstein, 1999) – there seems to be lack of understanding in defining the mechanisms by which they can systematically do so.

1.3 The purpose of this study

The paradox underlying the need for this study concerns established companies' engagement in corporate venturing as an attempt to generate corporate renewal and to respond to change in their business environment. *Scientifically,* this study aims at enhancing the understanding of the strategic need for corporate renewal, positioning corporate venturing among other possible sources of corporate renewal and exploring the mechanisms needed to link corporate renewal and corporate venturing. *From company point of view* this study aims at providing a framework for analyzing the characteristics of corporate renewal and corporate venturing activities and the way these two are linked. By doing so, it may help to better justify investment in corporate venturing, to improve management of the corporate venturing process and to maximize the leverage of corporate venturing as a source of corporate renewal.

The research gap: The two key concepts of interest to this study, corporate renewal and corporate venturing, have been topics of numerous studies. Firstly, several authors have noted the need for continuous corporate renewal (Bartlett & Ghoshal, 1998, Brown & Eisenhardt, 1998, Day et al., 2001, Merrifield, 2000, Meschi & Cramer, 1991). Secondly,

others have rooted strategic renewal to innovation which corporate venturing can play a role in sustaining (Brown & Eisenhardt, 1998, D'Aveni, 1994, Hamel, 2000, etc.). Thirdly, there are numerous studies that focus on corporate venturing from a large company perspective that focus different issues: The reasons for venturing have been described by a number of authors (Backlund, 1999, Coveney et al., 2002, Dickman et al., 2002, Rubery, 2002). Others have explored issues underlying the organization of internal venturing activities (Block & MacMillan, 1993, Day et al., 2002, Chesbrough & Socolof, 2000), the importance of management in internal venturing (Simon & Houghton, 1999, MacMillan & George, 1985) as well as the value creation mechanisms related to it (Tukiainen, 2004). In addition, there are different views about venturing in the strategic context of a company. Burgelman (1983a, 1983b, 1983c, 1984, 1988, 2002a, 2002b) and Burgelman & Sayles (1986) have described the internal corporate venturing process as an autonomous process taking place in the corporate context whereas other authors (Block & MacMillan, 1993, Garud & Van de Ven, 1992, Calish, 1984, Block, 1982) have described it as an induced activity. Furthermore, there are studies that cover the various aspects tof the external corporate venturing process (Chesbrough, 2002, Keil, 2002, Maula, 2001).

As it typically takes some 5-10 years to build new business (Biggadike, 1979, Chesbrough, 2002), it appears that the commitment to corporate venturing should be strategic in nature. The literature review does reveal that there appears to be a link between corporate renewal and corporate venturing, but that there seems to be limited understanding of the issues underlying that link. This study aims at filling that gap by exploring the fields of strategy and corporate renewal, innovation and corporate venturing and to establishing *a holistic view of venturing in the strategic context of an established company*.

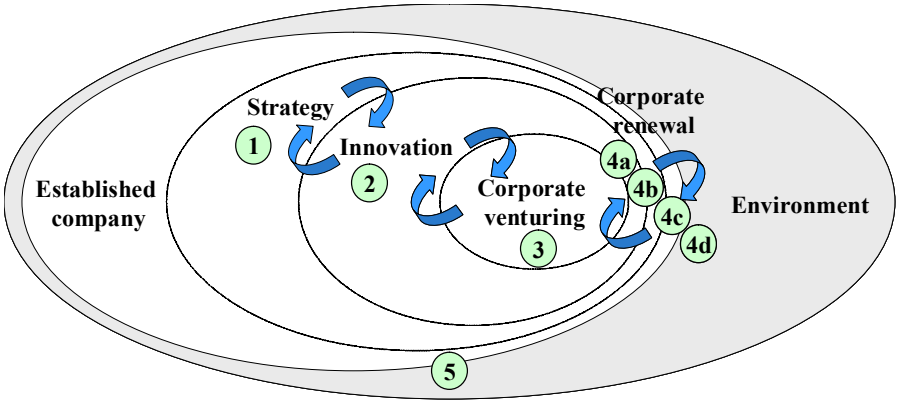
The unit of analysis in this study is the relation between corporate renewal and corporate venturing.

1.4 The research problem

Based on the identified research gap, the research problem is:

How can companies use corporate venturing in sustaining corporate renewal?

The research problem is opened to five research questions that are presented in Figure 1.



Conceptual level:	1) What are the factors that influence corporate renewal? 2) What are the sources of corporate renewal? 3) What are the mechanisms linking corporate venturing to corporate renewal? 4a) What are the key issues in sustaining corporate renewal through corporate venturing?
Empirical level:	4b) Did the ventures in case companies have potential for corporate renewal? 4c) How was venturing managed? 4d) How did the ventures renew the company (or did they)? Why?
Conceptual level:	5) How does corporate venturing help to sustain corporate renewal?

Figure 1 The key concepts and research questions

First, literature about strategy and corporate renewal is reviewed in order to establish a holistic view of the factors driving the need for continuous corporate renewal and to answer the first research question:

1. *What are the factors that influence corporate renewal?*

The strategic landscape is considered important because it essentially drives the need for corporate renewal. Special emphasis in the first part of theory building is in finding the mechanisms through which corporate renewal can be institutionalized.

The second research question concerns innovation as a source of corporate renewal and tries to establish an understanding of the essential elements of managing innovation as well as different innovation strategies available for established companies –

2. *What are the sources of corporate renewal?*

The volume of literature about the management of innovation is excessive. As far as this study is concerned the aim of the second part of the theory building is to position corporate venturing among other innovation strategies and to build a framework for assessing innovation to find opportunities that are the most suitable to be developed as ventures.

The answer to the third research question is sought from the literature about corporate venturing.

3. *What are the mechanisms linking corporate venturing to corporate renewal?*

The link between corporate venturing and corporate renewal seemed to depend on a number of issues including the underlying motive for venturing as well as the way in which venturing was organized and managed. However, at this point extending the literature review to the areas of knowledge management was needed to thoroughly understand the way corporate venturing and corporate renewal are linked.

The fourth research question was divided into four sub-questions. The first of them is still at the conceptual level and does introduce the framework which is then applied to the case companies to answer the subsequent three sub-questions:

4. *a) What are the key issues in sustaining corporate renewal through corporate venturing?*
4. *b) Did the ventures in the case companies have potential for corporate renewal?*
4. *c) How was venturing managed?*
4. *d) How did the ventures renew the company (or did they)?*

The question 4 a) draws together the concepts that are explored in order to answer the first three research questions. Based on them, it builds a *framework of strategic corporate venturing* which concerns an established company operating in a dynamic environment. That framework is then observed in the context of three companies that are engaged in venturing to explore its applicability to different venturing contexts.

Question five brings the discussion back to the conceptual level and discusses both theoretical and empirical findings of this study.

5. *How does corporate venturing help to sustain corporate renewal?*

1.5 Structure of the thesis

The dissertation is structured into five main entities as illustrated in the Figure 2.

The first part describes the motivation and purpose of this study. It opens the research problems to specific research questions that will be answered in the following parts. The first part also introduces the structure of the thesis as well as methodology and the key concepts used in it. In addition some of the theoretical traditions of strategy research are introduced to consider their applicability for interpreting the results at the end.

The second part is the largest in volume, as it covers a broad range of literature of strategy and corporate renewal, innovation and corporate venturing. Covering these three streams of literature is however necessary to build a sound theoretical basis for understanding the research problem and to achieve the purpose of this study - establishing *a holistic view of venturing in the strategic context of an established company*.

The part three describes the steps of building the framework of continuous corporate renewal. It binds together the key themes arising from the literature review: the importance of context, management processes and linking processes as elements of the framework.

In the fourth part the research problem is observed in its real life context – three established Finnish companies that are engaged in corporate venturing. The framework was applied to the data in two phases: The first phase encompassed exploring the overall strategic context of the case companies in order to understand the position of venturing in it. The second phase involved exploring the venturing context and the characteristics of selected ventures within it. Even though the number of observations was limited to three companies, the empirical findings did help to enhance the understanding of the topic.

The fifth part draws together the theoretical framework and the empirical findings and discusses them in relation to the purpose of the study. It also evaluates the scientific and practical contribution in the light of different theoretical traditions. The thesis ends by listing the topics for future research raised by this study.

The paradox:
Companies engage in corporate venturing to renew themselves – but seem to have difficulties in capturing the desired effect.

Part I: Introduction

Connecting the key themes: strategy, corporate renewal, innovation and corporate venturing
- Motivation of the study, the research gap and research problems
- Structure of the dissertation
- Essential concepts
- Theoretical traditions
- Methods and the research process

Part II: Theoretical background

Theories of strategy and corporate renewal
Question 1: What are the factors that influence corporate renewal?
- Determinants of strategy
- Strategy and change leading to the need to institutionalize corporate renewal
- The processes of continuous corporate renewal

Theories of innovation
Question 2: What are the sources of corporate renewal?
- The challenges in managing innovation
- Strategies for innovation
- Managing innovation as a source of corporate renewal

Theories of corporate venturing
Question 3: What are the mechanisms linking corporate venturing to corporate renewal?
- The reasons underlying the decision to venture
- The essential elements of a venturing context
- Managing corporate venturing
- The processes linking corporate venturing to corporate renewal

Part III: The framework

The framework of continuous corporate renewal
Question 4a: What are the key issues in sustaining corporate renewal through corporate venturing?
- The context
- The management processes
- The linking processes
- Relating the elements of the framework into a cohesive whole

Part IV: Empirical observations

Validating the framework
Question 4b: Did the ventures in case companies have potential for corporate renewal?
Question 4c: How was venturing managed?
Question 4d: How did the ventures renew the company (or did they)?
- Describing the empirical research setting
- Analysis and interpretation of the observations
- Applying the framework to the data

Part V: Discussion

Propositions and discussion
Question 5: How does corporate venturing help to sustain corporate renewal?
- Discussing the most important findings of the study
- Evaluation of the theoretical and practical contributions
- Topics for future research

Figure 2 The structure of the dissertation

1.6 Definitions

1.6.1 Strategy

Definitions of strategy seem to emphasize either the intended or unintended nature of strategy. According to the authors belonging to the *intended* school strategy is the direction and scope of an organization over the long term, which achieves advantage for the corporation through its configuration of resources within a changing environment to meet the needs of markets and stakeholder expectations (Johnson & Scholes, 1999). It is the pattern or plan that integrates an organization's major goals, policies and action sequences into a cohesive whole (Quinn, 1980). Strategy is a firm's theory of how it can gain superior performance in the markets within which it operates (Barney & Arikan, 2001). In the broader sense, strategy also concerns the rational determination of a company's vital interests, the purposes that are essential to its continued survival as an institution and define it in relation to other organizations, and its objectives (Burgelman, 2002, p. 4). A well-formulated strategy helps to marshal and allocate an organization's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment and contingent moves by intelligent opponents. Strategic decisions are those that determine the overall direction of an enterprise and its ultimate viability in light of the predictable, unpredictable and the unknowable changes that may occur in its most important surrounding environments (Quinn, 1980). Strategic action is consequential; it involves resource commitments that cannot easily be undone and moves the company in a direction that is not easily reversible (Burgelman, 2002b, p. 4). Mintzberg (1987a) describes strategy as plan, ploy, pattern, position and perspective. Strategy as a plan is a consciously intended course of action. Strategy as a ploy is also a deliberate move, but just a strategic maneuver intended to outwit an opponent or a competitor. A stream of actions, consistency in behavior, whether or not intended, forms a pattern of strategy. Strategy as a position is about defining and defending the company position in the competitive environment. Strategy as a perspective is not just about the chosen position, but as an ingrained way of seeing the world.

Recent literature moves from intended to *unintended* direction. It reveals that management focus in relation to strategy is shifting from planning and building a position (Porter, 1979, Quinn, 1980, Rumelt, 1980) to a more dynamic direction (Mintzberg, 1987b, Quinn & Voyer, 1994, D'Aveni, 1994). Today, the focus of strategic management is more on institutionalizing change, i.e. in building methods and policies to foster flexibility and dynamic capabilities. In Minzberg's (1987a) terms, strategy as a perspective for change is dominant, planning concerns less the building of a position and more the recognition of the pattern and ploy to gain temporary advantage. In essence, corporate strategy is about being different. It means deliberately choosing a different set of activities in order to deliver a unique mix of value (Porter, 1996), which Näsi (1991) describes as the plot of the firm's action and the string that pulls together the events.

In reality, realized strategy includes both intended and unintended elements (Johnson & Scholes, 1999, Mintzberg, 1987b). It is induced and autonomous at the same time (Burgelman, 2002b). Intended (deliberate, induced) strategy is an expression of desired strategic direction deliberately formulated or planned by managers. Emergent (autonomous, unintended) strategy is developed in the absence of intentions or despite them (unrealized strategies). In reality, these forms of strategy define the strategic course of a corporation as illustrated in the Figure 3.

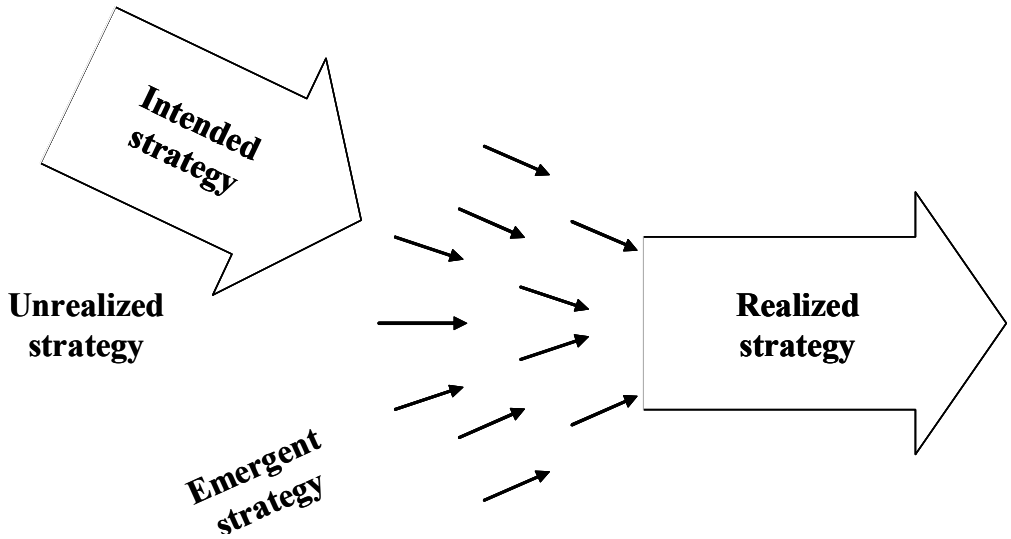


Figure 3. Deliberate and emergent strategies (Minzberg, 1987)

In this study, strategy is seen to depend on the changing environment and the internal context in which it takes place. This study defines strategy as *an attempt to take into accounts both deliberate and emergent strategies for guiding the course of action.* As seen in this study strategy has in-built flexibility which is seen as the basis for achieving continuous corporate renewal.

1.6.2 Corporate renewal

Corporate renewal is a term closely related to "revitalization", "restructuring" or more generally "change" and has been defined by a number of authors. Table 1 summarizes some of these definitions of corporate renewal.

Today, corporate renewal is increasingly recognized as a process (Bartlett & Ghoshal, 1995, Beer & Eisenstat, 1990, Ghoshal & Bartlett, 1996, Merrifield, 1993, Mezias & Glynn, 1993), not as a single act – a view that seems to fit today's global and dynamic environment. It may take place in different levels, which Covin & Miles (1999) identify as sustained regeneration, organizational rejuvenation, strategic renewal and domain redefinition. This study positions corporate renewal as *strategic* and builds on the definitions of Meschi & Cremer (1999) who describe strategic renewal as a series of actions which affect the very foundations of the company, and Sharma (1999) who defines corporate renewal as an action comprising of the corporate entrepreneurial efforts that result in significant changes to an organization's business or corporate level strategy or structure. It also takes into account the definition of Hart & Berger (1994) who describe corporate renewal as fundamental and lasting change in an organization's character and performance, its relation to the environment (customers), processes (configuration of technology), structures, systems and routines (decision making, information, human resources) as well as financial outcomes and individual and organizational behavior.

Author/Year	Definition	Desired outcome
Bartlett & Ghoshal, 1995	What self-renewing companies have in common is a carefully nurtured, deeply embedded corporate work ethic that triggers the individual-level behaviors of entrepreneurship, collaboration and learning that are the foundation of organizational renewal.	Revitalizing business by rejuvenating *people*
Beer & Eisenstat, 1990	Corporate renewal refers to the companywide change programs to respond to changing markets and increased competition.	Task alignment, reorganizing employee roles, responsibilities and relationships to solve specific business problems
Covin & Miles, 1999	Corporate entrepreneurship is engaged in to increase competitiveness through efforts aimed at the rejuvenation, *renewal* and redefinition of organizations their markets and industries.	Increasing competitiveness of organizations, markets, industries
Damanpour, 1991	Innovation is a means of changing an organization, whether as a response to changes in its internal or external environment or as a preemptive action taken to influence an environment.	Innovation as a source of corporate renewal
Ghoshal & Bartlett, 1996	Corporate renewal referred as successful transformation which is based on carefully phased approach that focused on developing particular organizational capabilities in appropriate sequence and managers' ability to recognize that transformation is as much a function of individual's behaviors as it is of the strategies, structures, systems that top management introduces.	Renewal through development of discipline, support, trust, and stretch
Hart & Berger, 1994	Corporate renewal is defined as large scale organizational change which has fundamental and lasting impact on an organization's character and performance, detectable in e.g. relations to the environment (customers), transformation processes (configuration of technology), structures, systems and routines (decision making, information, human resources) as well as in financial outcomes and individual and organizational behavior.	depth of change, pervasiveness of change, organizational size
Merrifield, 1993	Continuous renewal is a process structured specifically to manage continuous change and to simultaneously involve all elements of management (marketing, production, technology, legal and financial).	driven primarily by the emergence of "next generation" technologies
Meschi & Cremer, 1999	Corporate renewal defined as a series of actions which affected the very foundations of the company i.e. its core competencies.	core competencies
Mezias & Glynn, 1993	Corporate renewal is associated with the process of innovation and defined as non-routine, significant and discontinuous organizational change.	institutionalizing innovation, revolutionary innovation, evolutional innovation
Sharma, 1999	Strategic renewal refers to the corporate entrepreneurial efforts that result in significant changes to an organization's business or corporate level strategy or structure.	pre-existing relationships within the organization or between the organization and its external environment

Table 1 Definitions of corporate renewal.

Corporate renewal often involves organizational innovation that has also been referred as structural, systems or administrative innovation. According to Hoffman (1999), structural innovations are those that affect the shape of the organization's structure, such as new positions or departments, as well as the formal/informal relationships among them and systems innovation refers to formal processes which enable the structure to function, such as planning and control systems. Administrative innovations involve organizational structure and administrative processes (Damanpour, 1991). This study sees organizational innovation as an important part of corporate renewal.

Building on the definitions presented in Table 1, this study defines corporate renewal as *series of actions leading to a change in the strategic direction of a company.* These actions involve changes in the ways the company does business and/or how it configures its resources and capabilities, that is changes in the corporate context and processes taking place in that context.

1.6.3 Innovation

According recent studies innovation is not a single act but rather a process which begins with an idea or an invention (Damanpour, 1991, Dougherty & Bowman, 1995, Drucker, 2002, Tidd et al., 2001, Van de Ven et al., 2000). The classification of innovations into different *types* focuses attention to the outcomes of the innovation process which have been defined as a new product or service, a new production process technology, a new structure or administrative system or a new plan or program pertaining to organizational members (Damanpour, 1991). Table 2 summarizes some of these definitions of innovativeness and innovation.

Definitions of *product innovation* describe it as change in the *products or services* which an organization offers (Tidd et al., 2001). Product innovation is analyzed along the degree of readiness and autonomy. *Degree of readiness* has been recognized by Chapman et al. (2001) who note that product innovation may concern a product that is in the developing phase, a product that has been already released to the market or a transfer of solutions between products. *Degree of autonomy* refers to the development of product families and product platforms (Meyer & Utterback, 1993) as well as to the degree of change in the

component and/or architectural level (Christensen 1992a, 1992b, Henderson & Clark, 1990, Miller & Ferguson, 1993, Tidd, 1997, Tidd et al., 2001).

Process innovation is described as change in the process through which products and services are created and delivered (Tidd et al., 2001). A view of process innovation involves manufacturing and product development processes (Pisano & Wheelwright, 1995. From a wider perspective process innovation involves the entire business system that is engaged in developing ideas into deliverable products or services. In that sense process innovation is close to business model (concept) innovation, which according to Hamel (2000) is the capacity to imagine dramatically different business concepts or dramatically new ways of differentiating existing business concepts. Business model is a wide and all-encompassing concept and the innovation outcomes related to business model innovation are mostly intangible of nature (Chesbrough, 2003).

Intangible outcomes of the innovation process encompass organizational and administrative components. Administrative innovations tend to be less tangible than new business creation; there are no hard devices, products or prototypes in the case of administrative innovations (Van de Ven et al., 2000a, p.299). According to Tidd et al. (2001) intangible innovation involves deployment of knowledge which in many cases is of a less tangible kind, for example in the development of new methods or techniques. These include architectural innovations within an organization (Galunic & Eisenhardt, 2001) which can be classified as *dynamic capabilities*. Intangible outcomes of the innovation process involve also sustaining innovativeness in general – which according to Damanpour (1991) can be seen as means of changing an organization, whether as a response to changes in its internal or external environment or as a pre-emptive action taken to influence an environment.

Author/Year	Definition	Outcome/action
INNOVATION AND INNOVATIVENESS		
Damanpour, 1991	"the adoption of innovations is conceived to encompass the generation, development and implementation of new ideas or behaviors – an innovation may be a new product or service, a new production process technology, a new structure or administrative system or a new plan or program pertaining to organizational members"	generation, development, implementation
Drucker, 1985, p.19	"innovation is the specific tool for entrepreneurs, the means by which they exploit change as an opportunity for a different business or a different service"	exploiting
Tidd et al. 2001, p.38	"innovation is a process of turning opportunity into new ideas and putting these into a widely used practice"	turning
Van de Ven et al., 2000	"invention is the generation of a new idea, but innovation is more encompassing and includes the process of developing and implementing a new idea"	generation, development, implementation
PRODUCT INNOVATION		
Chapman et al. 2001	"innovation may concern a product that is in the developing phase, a product that has been already released to the market or a transfer of solutions between products"	developing, transfer
Dourgherty & Bowman, 1995	"produt innovation is a complex process of problem solving in three domains of activity: 1) conceptualizing the product design, 2) organizing the work and 3) linking the product to the firms resources structures and strategy"	process
Meyer & Utterbck, 1993	"individual products are the offspring of the product platforms that are enhanced over time – product families and their successive platforms are themselves the applied result of a firm's underlying core capabilities"	enhancing core capabilities
PROCESS INNOVATION		
Pisano & Wheelwright, 1995	"in many high-tech markets in which product technology is rapidly evolving, manufacturing process innovation is becoming an increasingly critical capability for product innovation"	manufacturing process
Tidd et al., 2001 p.6	"innovation involves change in the products or services which an organization offers or in ways in which they are created and delivered"	change in ways of delivering and creating products and services
BUSINESS MODEL INNOVATION		
Chesbrough, 2003, p.63	"although the term business model is usually applied in the context of entrepreneurial firms, it also has value in understanding of how companies of all sizes can convert technological potential into economic value"	converting technological potential into economic value
Hamel, 2000, p. 65-66	"The building blocks of a business model and business concept are the same – business model is simply a business concept put into practice. Business concept innovation is the capacity to imagine dramatically different business concepts or dramatically new ways of differentiating existing business concepts"	capacity to imagine

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Author/Year	Definition	Outcome/action
ARCHITECTURAL INNOVATION		
Christensen, 1992a Christensen, 1992b	"architectural change involves rearrangement of the way in which components (whose fundamental technological change remains unchanged) relate to each other within a products system design"	component relations within product system design
Henderson & Clark, 1990	"we define innovations that change the way in which the components are linked together, while leave the core design concepts (and thus the basic knowledge underlying the components) untouched as architectural innovation"	change
Morris & Ferguson, 1993	"an architectural controller is a company that controls one or more standards by which the entire information package is assembled"	control
Tidd et al., 2001, p. 12	"another important concept is the idea of new products as stand alone elements or as components of a broader systems"	element
INTANGIBLE INNOVATION		
Damanpour, 1991	"innovation is a means of changing an organization, whether as a response to the changes in its internal or external environment or as a preemptive action taken to influence an environment"	means of changing an organization
Galunic & Eisenhardt, 2001	"this article describes how dynamic capabilities that reconfigure division resources – that is architectural innovation - may operate within multi-business firms"	dynamic capabilities
Tidd et al., 2001, p. 13	"innovation involves deployment of knowledge…much change is of a less tangible kind, for example in the development of new methods or techniques"	deployment of knowledge

Table 2 Conceptualizations of innovation

Definitions of innovation involve multiple dimensions which need to be understood in order to deal with their consequences. This study does recognize the importance of product and process innovations which are used to determine the renewal potential of individual innovations (ventures). However, it focuses more on the intangible innovation and applies a holistic view of innovation and positions the process of innovation as *a source of corporate renewal.* According to that view innovation is both a means to an end and an end itself - in today's changing business environment systematic "general innovativeness" is needed to breed the sustainability of existing competitive advantages and the process of building new ones.

1.6.4 Corporate venturing

Definitions of corporate venturing as an organizational function link it to the concepts of "corporate entrepreneurship", "internal entrepreneurship", or "intrapreneurship" (Vesper,

1990, p. 324). According to Sharma (1999) corporate venturing comprises of entrepreneurial efforts leading to the creation of new business organizations within the corporation. They may follow from or lead to innovations that exploit new markets, new product challenges, or both. These venturing efforts may or may not lead to the formation of new organizations that are distinct from existing organizational units in a structural sense e.g. a new division.

At the venture level, the definitions focus on the differences between ventures and mainstream R&D projects. According to Tidd et al. (2001) a corporate venture differs from conventional R&D and product development activities in its objectives and organization. While R&D seeks to exploit existing technological and market competencies, the primary function of a new venture is to learn new competencies. Block & MacMillan (1993) define a venture as a project that involves an activity new to the organization involving significantly higher risk of failure or larger losses than the organization's base business and that is characterized by greater uncertainty than the base business. The venture is managed separately at some time during its life and is undertaken for the purpose of increasing sales, profit, productivity or quality.

In addition to defining corporate venturing in the corporate level and differences between ventures and mainstream R&D it is essential to understand that venturing activities can encompass multiple organizational forms. Depending on a company, ventures may take place within the existing business units or involve establishing a separate new venturing unit for managing the venturing activity. *Internal corporate ventures* are legally part of the organization and therefore funded and managed within the corporate context, but are often separated from the mainstream business (David, 1994, Sharma, 1999). They are the main responsibility of venture managers and use resources that are mainly under the control of the firm. In addition, companies may engage in *external corporate ventures* that are investments in outside companies, with emphasis on creating strategic benefits for the company. Sharma (1999) defines these as activities that result in the creation of semi-autonomous or autonomous organizational entities that reside outside the existing organizational domain. External corporate venturing encompasses several organizational modes. These include venture capital investments, alliances, acquisitions and spin-offs

(Keil, 2002). Corporate venture capital activity refers to a corporation participating in the private equity market (Gompers & Lerner, 2002). The different forms of corporate venturing are illustrated in the Figure 4.

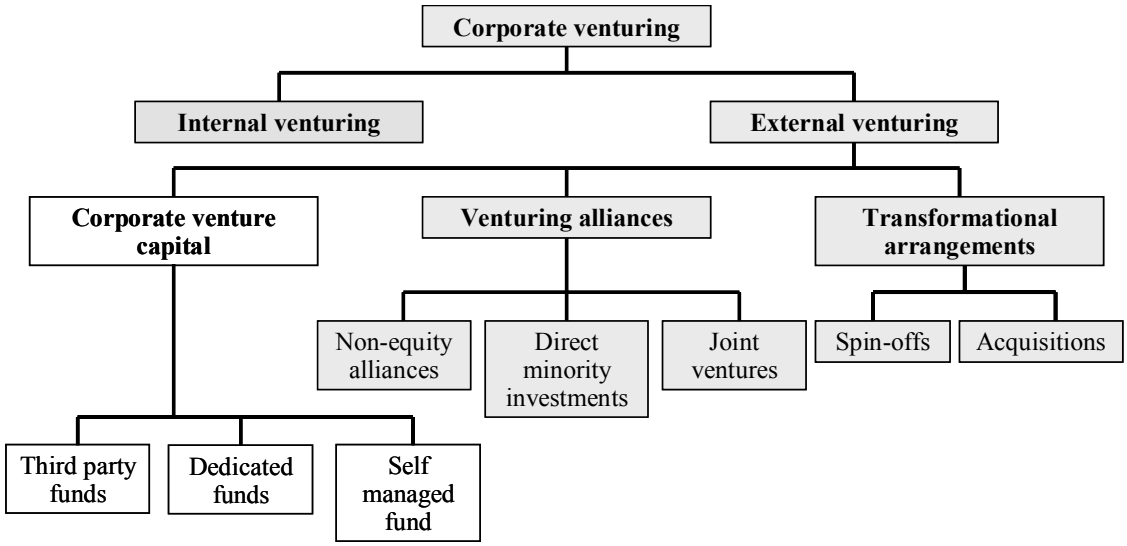

Figure 4 Modes of corporate venturing (Keil, 2002).

This study defines a corporate venture as *a strategic new business development project focusing on corporate renewal.* As such a corporate venture may encompass different organizational forms in order to sustain corporate renewal in the short, medium and long terms.

1.7 Research methodology

1.7.1 Selection of a research strategy

This study belongs to the field of Business Management which can be categorized as applied science (Näsi, 1980, p.1) or more specifically Industrial Engineering and Management which as a scientific tradition seeks to understand industrial enterprises and provide valuable insights for their management (Hameri, 1990, p. 58). In this field the research strategies can be classified into two main categories: positivistic logic (quantitative) which is based on objective data and analysis methods and hermeneutics (qualitative) which seeks to understand the research topic and the causal logic and change

processes taking place in relation to it in a situation in which statistical analysis are not applicable (Olkkonen, 1994, p.50-53).

The research process began by finding a problem that was of interest from academics', researcher's and practitioners' point of views. Relation between corporate renewal and corporate venturing emerged as an interesting topic that fulfilled the criteria. Preliminary literature review revealed a need for developing a holistic view of corporate venturing in corporate context and the factors underlying its relation to corporate renewal. That relationship appeared to involve more than what is directly measurable according to the positivistic logic and thus this study applied the hermeneutical, qualitative approach which can be described as comprehension, purposive sampling and lack of exact hypothesis (Eskola & Suoranta, 2003, p.14-15).

Action analytic methodology seemed to provide the tools necessary to understand the research problem. As far as validating the construction was concerned the case study method appeared to provide a systematic way to gather data from the companies and improve the understanding of the theoretical construct in the real life context in which it takes place.

1.7.2 Action analytic research strategy

The word hermeneutics comes from Creek verb hermeneuein ("to interprete"). In science, hermeneutical interpretation means that the researcher approaches the topic through theoretical assumptions which are seen to describe the research topic (Haaparanta & Niiniluoto, 1986, p. 65). Action analytic research methodology proceeds according to the hermeneutical logic and aims at understanding the research topic (Olkkonen, 1994, p. 72). The topic of this study, relation between corporate venturing and corporate renewal, involves characteristics typical to that approach: it is a process internal to the company and in addition to the "hard" characteristics it involves people and their underlying motives. The Figure 5 illustrates the action analytic approach to the research.

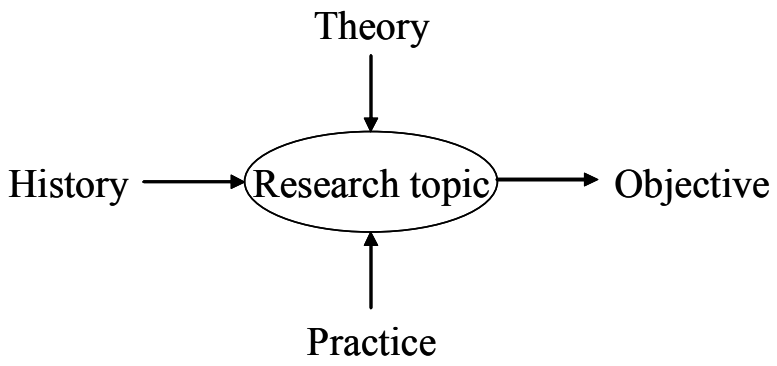

Figure 5 Action analytic research approach

The challenges related to the action analytic research methodology relate to validation and generalization of the results (Olkkonen, 1994, p. 74). As far as this study is concerned the primary aim is to enhance the understanding of the research problem.

1.7.3 The case study method

The distinctive need for case studies arises out of the desire to understand complex social phenomena. It is a way to retain the holistic and meaningful characteristics of real-life events (Yin, 1994, p.3). The framework of strategic corporate venturing fits this description. It provides a *holistic* view of a corporation, its strategic environment and corporate venturing within it. As corporate renewal and corporate venturing are *complex, real-life* phenomena which are embedded in the corporate context the case study method was found to be a good way to study both phenomena and to define the relation between them.

A case study is an empirical enquiry that investigates a contemporary phenomenon in its real-life context when boundaries between phenomenon and context are not clearly evident (Yin, 1994, p.13). The case study method as applied in this study can be categorized as a descriptive case study which aims to describe an intervention (the relation between corporate venturing and corporate renewal) and the real-life context (a company and its environment) in which it occurred. It has however some explanatory features as it indicates relationships between components of the framework.

According to Yin (1994, p. 20) research design for case studies involves defining a study's questions, its proposition (if any), unit of analysis, logic of linking data to the proposition and the criteria for interpreting the findings. To ensure that the method was correctly applied this study proceeded through these steps:

- The research problem was defined as: *How can companies use corporate venturing in sustaining corporate renewal?*
- This study proposed a framework of strategic corporate venturing the validation of which was the primary target of the case studies.
- The unit of analysis was defined as the relationship between corporate venturing and corporate renewal.
- The case companies and persons interviewed were selected to provide information about the key concepts of the framework: different contexts (corporate, innovation, venturing) and the related management and linking processes.
- The framework of strategic corporate venturing was used as the basis for analyzing data and interpreting findings.

1.7.4 Ensuring the quality of the data

In qualitative research the selection of the object of research is in the same position as in the selection of the sample in quantitative research (Mäkelä, 1990, p.42). When using qualitative methods the criteria for scientific research are not the quantity of data but the quality of it (Eskola & Suoranta, 2003, p. 61-62). In order to ensure the quality of data this study focused on fulfilling the following requirements:

- **Avoiding bias:** Even though majority of the theory development took place prior to gathering data, no exact hypothesis or questions were defined prior to the interviews. An interview map presented in the chapter 4.1.2 (Figure 16) was used to ensure that issues relevant to the framework were discussed during open interviews.

- **Finding the key people:** In each company, the interviews involved respected professionals that were in a position to provide valuable information about the topic. Interviewees were found by using a snowball method. In each company the starting point was a senior manager involved in venturing (2 cases) or a senior manager responsible for corporate renewal (1 case).
- **Using multiple sources of information:** In addition to interviews complementary information was sought in the form of internal documentation, the internet, annual reports and other public sources.

1.7.5 Validity and reliability

Validity means ability to measure exactly what is intended to be measured (Uusitalo, 2001, p. 84). In this study the unit of analysis was defined as the relation between corporate renewal and corporate venturing. The unit of analysis guided both theoretical and empirical work during the study. The validity of the theoretical construct is good: it is based on a carefully selected volume of recent literature about strategy and corporate renewal, innovation and corporate venturing.

Majority of the theoretical work was carried out before gathering data. Thus selection of interviewees was done keeping in mind the issues identified in the framework of strategic corporate venturing. In order to achieve construct validity this study applied the methods suggested by Yin (1994, p.34). It relied to multiple sources of evidence, documented the chain of evidence and is about to have the case study report reviewed by key informants. This study aimed at describing and explaining the relation between corporate renewal and corporate venturing. As far as internal validity (Yin, 1994, p.35) is concerned this study's propositions indicate causal relationships but does not determine them explicitly. Pattern matching (Yin, 1994, p.) appeared useful in analyzing the strategic role of venturing in the case companies and was also applied in analyzing the ventures.

The case study is a research strategy which focuses on understanding the dynamics present within single settings (Eisenhardt, 1989). However single cases offer a poor basis for generalization (Yin, 1994, p.36). Gathering data from more than one company was

seen as good way to obtain different views of corporate renewal and corporate venturing and to achieve a better understanding about the relationship between them.

Reliability concerns the ability to achieve non-random results (Uusitalo, 2001, p.84). Today, the amount of literature available is huge. Thus it appears that the starting point for any research project matters: it leads the choice of subsequent literature which in turn affects the results. The researcher used a research database as suggested by Yin (1994, p. 104) to keep track of the material and preliminary versions of the study. Paying attention to documenting the chain of evidence was an attempt to achieve reliable results.

Another issue related to reliability concerns the role of the researcher. As this study is qualitative in nature, researcher has inevitably an effect in the results. In order to ensure the reliability of this study the researcher did try to avoid bias in the empirical phase by relying to multiple sources of information: the information gained in interviews was backed up by documentation and archival records whenever possible.

2 Theory development

2.1 Theoretical traditions

The theoretical traditions of strategy research describe the logic behind a choice of strategy by taking into account transaction costs, agency costs, as well as the corporate resources, knowledge and capabilities accumulated in the organization. Rather than choosing a single tradition up-front, this study left the applicability of the different theoretical traditions to be discussed in the end of this study.

Transaction costs are conceptualized as the costs of negotiating, monitoring and enforcing exchanges between parties (Jones, 2001). According to the transaction cost approach the fundamental choice the firm faces is whether to produce in-house, buy from the market or establish partnerships with other firms (Blomqvist, 2001).

Agency theory is concerned with problems that can arise in any cooperative exchange when one party contracts with another. It involves agency problems, which develop because agents can hide information and/or take actions that favor their own interests. Agency costs occur due to protective actions (monitoring, contracting, etc.) taken to avoid these problems. According to agency theory, it is rational for the contracting parties to incur agency costs up to the point where the cost of eliminating the problems exceeds the benefits (Lubatkin et al., 2001).

The resource based theory of the firm sees a company as a bundle of resources which establish the basis for generating competitive advantage (Penrose, 1959). According to Barney & Arikan (2001) resources are the tangible and intangible assets firms use to conceive of and implement their strategies. They are firm specific, and can be specified as all assets, capabilities, organizational processes, attributes, information, knowledge etc. controlled by the firm that enable the firm to conceive and implement strategies that improve its efficiency and effectiveness. Resources can be further divided into physical, human and organizational capital resources (Barney, 1991). The resource based theory assumes resource heterogeneity, i.e. competing firms may possess different bundles of

resources, and resource immobility, i.e. these differences may persist (Barney & Arikan, 2001).

The knowledge based view of the firm highlights the importance of knowledge-based assets, and defines a company as a repository of knowledge (Fransman, 1998) or as a dynamic entity which has the capability to create new knowledge based on existing firm-specific capabilities and continuous interaction with its environment (VonKrogh et al., 2000). Knowledge assets include know-how, customer relationships, brands and superior processes (Teece 1998). The durability of knowledge-based competitive advantages depend on the codifiability or tacitness of knowledge. Tacit knowledge refers to knowledge that cannot be explicitly articulated and codified. It is person or team specific, difficult to transfer, and thus an important source of competitive advantage (Nonaka & Takeuchi, 1995).

The dynamic capability view of the firm emphasizes the shifting character of the environment and the key role of strategic management in appropriately adapting, integrating and re-configuring internal and external organizational skills, resources and functional competencies towards a changing environment (Teece & Pisano, 1994). According to them, the strategic dimensions of the firm are its managerial and organizational processes, its present position and the paths available to it. In essence, dynamic capabilities are the organizational and strategic processes by which the managers manipulate resources into new productive assets in the context of changing markets (Galunic & Eisenhardt, 2001). These include product development, strategic decision making and alliancing (Eisenhardt & Martin, 2000). The dynamic capabilities reflect an organization's ability to achieve new and innovative forms of competitive advantage given path dependencies and market positions (Teece et al., 1997).

2.2 Theories of strategy and corporate renewal

2.2.1 The determinants of strategy

Drawing from the recent studies of different "strategy schools" as identified by Näsi (1991, p.30-31) this study looks into the various aspects of strategy. It identifies eight

determinants of strategy as *industry, location, resources, knowledge, structure and culture, market, technology and business model*, and uses them as the basis for understanding an established company's current competitive position and the challenges it encounters in changing conditions. Choice of these determinants of strategy – and not others – is based on existing literature and will be discussed in relation to each determinant.

Industry was identified as the first determinant of strategy, because industries differ in the amount of resources devoted to R&D and in the rate of technological advance (Tidd, 1997) which in turn influence the strategies available for companies within an industry and the profitability of an average competitor (McGahan & Porter, 1999, Porter, 2001, Vesper, 1990, p. 35).. The differences in the ideas and opportunities that companies typically encounter relate to the scarcity or abundance of new ideas, cost related to company resources, product complexity and the availability of diversification opportunities (Christiansen, 2000). In addition the environments differ in terms of competitive pressure, length of product life and extent of regulation. Also, there are differences in the stability and predictability of environment in terms of the level of uncertainty and the frequency of radical transformation (Christiansen, 2000, Porter, 1979). The five forces analysis (Porter, 1979) is a well-known tool to analyze the level of competition of an industry. The five competitive forces still determine profitability even if suppliers, channels, substitutes, or competitors change (Porter, 2001) and can be applied to a multimarket situation when there is a partial overlap of two firms' geographic and product markets. D'Aveni (2002b). Some authors (Hamel, 2000, Tapscott et al., 2000) imply that for long term success it is essential to view a broader set of opportunities, not just the ones taking place in the industries in which the company currently operates. Often, the companies those are able to create completely new industries or make an entry into an industry at an early stage and thus shape the industry structure, experience rapid growth and high profitability. Yet, Meschi & Cremer (1999) conclude that in mature companies the main factor governing profitability and growth is less the structure of the industry than the implementation of an entirely rejuvenated and reworked strategy, that is, how companies respond to change.

Location is still important determinant of strategy even though today companies operate in increasingly global markets. Location relates to the national context of a company (Furman et al., 2000, Prahalad & Doz, 1987, Porter & Stern, 2001) and has an impact on corporate culture (Kelmegor, 2002). The importance of location also relates to the fact that "new-to-the-world" innovation tends to be concentrated among a small number of countries at any given point of time (Furman et al., 2000). Companies face inevitable tensions between geographic dispersion for adapting to local markets and the integration of local skills and geographic concentration for the effective launching of major innovations (Tidd et al., 2001). The location challenge in today's competitive environment is about being "metanational": global enough to see emerging trends and opportunities and local enough to benefit from pockets of specialized knowledge scattered around the globe (Doz et al. 2001). Another way to respond to the location challenge is using new technologies, namely internet, to enable rapid diffusion of information, easy information sharing and working from a distance as tools of global teams that according to Marquardt & Horvath (2001) are a powerful way to respond quickly to challenges posed by the global marketplace.

Resources are today less tangible and more intangible – and clearly something to consider when defining strategic directions. Invisible assets are information based resources such as technology, customer trust, brand image and control of distribution, corporate culture and management skills (Barney & Arikan, 2001). Global competition is literally "head-to-head" (Hamel & Prahalad, 1993) and people with specialized knowledge, skills and resources are the key strategic resource (Bartlett & Ghoshal, 2002) and the most important ingredient of the innovation process (Ghoshal, 2000, Maidique, 1980, Pearson, 2002, Tidd et al., 2001). Every human being comes with the capability to find and solve complex problems, and where such creative behavior can be harnessed amongst a group of people with different skills and perspectives extraordinary things can be achieved (Tidd et al., 2001).

Knowledge is a key strategic resource. It differs from other organizational resources in two important ways: it is more fugitive than physical assets and can be applied to very different product categories. In addition it is organizationally embedded making it

difficult for competitors to imitate (Martin & Eisenhardt, 2001). The important characteristics of knowledge are its codifiability or tacitness (Nonaka & Takeuchi, 1995, Tidd et al., 2001). An organization cannot create knowledge on its own without the initiative of the individual and the interaction that takes place within the group (Nonaka & Takeuchi, 1995, p. 13). Knowledge creation at the individual level involves the ability to deal with new situations., events information and contexts (Von Krogh et al., 2000). To mobilize knowledge companies need social capital, which concerns both individuals and networks. Social capital is an important influence in creating intellectual capital, which is defined as the knowledge and knowing capability of the organization (Nahapiet & Ghoshal, 1999). Strategic management of knowledge is essential because knowledge based innovation is characterized by a long time span between the emergence of new technology and its applicability (Drucker, 1985). It requires a special combination of entrepreneurial, managerial and technological roles (Maidique, 1980).

Structure and culture also define strategy for their part. The organizational structure influences the way the company perceives its environment and defines the opportunities presented to it. Corporate culture is the deeper level of basic assumptions and beliefs that are shared by members of an organization that operate unconsciously and define in a taken-for-granted fashion an organization's view of itself and the environment (Johnson & Scholes, 1999). As an organization matures it becomes more formal and has more levels of authority (Abernathy & Utterback, 1978). For established company its structure and culture, developed along with a profitable business, may actually inhibit innovative thinking needed to create new business (Calish, 1984). Failures in established firms to benefit from radical new technologies may arise less from the inability to master them, and more from the inability or unwillingness to deal with their consequences for organizational change (Tidd et al.,2001). Moving from invention to the marketplace may be socially or managerially intolerable for a large company, as it may involve jeopardizing the many other products, projects, jobs and communities the company supports (Quinn, 1985). For its part, corporate culture underlies a company's ability to respond to change. It defines the internal selection environment of a company, which according to Grove & Burgelman (1996) mediates the link between corporate strategy and strategic action as well as the link between distinctive competencies and the basis of

competitive advantage. As such, it may be more important for company survival than the stated strategy. To create innovations and new value, a company is required to sacrifice some efficiency by allocating resources to uses that do not yield the highest immediate returns. By creating an environment in which people can create new combinations of resources, companies can create new value and new markets (Ghoshal, 2000). While strategy, structure and systems remain important, the turbulent marketplace requires shifting strategic management focus to purpose, people and processes (Bartlett & Ghoshal, 1994). However strategic flexibility isn't easy as it involves balancing the need for immediate dimensional autonomy with the potential need for future cooperation (Raynor & Bower, 2002).

While the first five determinants of strategy: *industry, location, resources, knowledge as well as structure and culture* deal with the corporate context, the next three determinants: *market, technology and business model* are the building blocks of sustainable competitive advantage. Together with the five elements encompassing corporate context they define how a company chooses to compete.

Market orientation is a construct consisting of three behavioral components: customer orientation, competitor orientation and interfunctional coordination, and two decision criteria: long-term focus and profit objectives (Narver & Slater, 1990). It focuses the organization on continuously collecting information about target customers' needs and competitors' capabilities and on using this information to create continuously superior customer value (Slater & Narver, 1995). Market orientation has been found to be an important determinant of profitability (Narver & Slater, 1990) and positional advantage (Hult & Ketchen, 2001). Also, according to Christensen & Bower (1996), established companies' ability to benefit from opportunities is dependent on market orientation and related investment decisions. While today's markets are the basis on which a company's current competitive advantages are built they are often not enough to build new ones. Close interaction with customers, suppliers and manufacturers help to implement a series of incremental product improvements (Ghoshal, 2000, Porter, 1979, Von Hippel, 1988). Established companies' perceptions of the market are effected by their past and often dominated by the views of their customers (Christensen, 1997). There are numerous

examples of companies that have lost their position in the marketplace because they suffer from an "innovator's dilemma" (Christensen, 1997) or "tyranny of success" (Tushman & O'Reilly, 1997) - companies that have failed to understand the characteristics of market change and to see new opportunities as they emerge. Concluding the importance of market, I agree with Ulwick (2002), according to whom too much customer orientation can lead to the undermining of innovation and conclude that strategy needs to underlie the choice of markets which will essentially require market orientation beyond existing customers in the long term.

Technology is a key element of sustainable competitive advantage and corporate strategy. Differences in technological opportunity are associated with different market structures and firms' strategies (Tidd, 1997). Technological change triggers innovation related to the products or services the company offers or/and in the way (process) they are created and delivered. The relevant characteristics of a technology affecting corporate strategy include its competitive significance, complexity, its codifiability (or tacitness) and its credibility potential (Tidd et al., 2001). In other words, strategy needs to take into account speed and magnitude of technological change. In the case of disruptive technologies, the power to capture profits will shift in the value chain to those activities where the immediate customer is not yet satisfied with the functionality of available products (Christensen et al., 2002). Also pacing technologies, i.e. those with the potential to become tomorrow's key technologies have a great strategic importance (Tidd et al, 2001). These technologies typically contrast the pace of technological progress with a customer's ability to use it. Existing customers fail to assess the potential of disruptive technologies because performance attributes are different in the beginning. When they notice the rapid improvement in performance attributes that they do value, it is often too late for the established suppliers to gain a strong position in the field of new technology (Bower & Christensen, 1995, Christensen et al., 2001). According to Dougherty et al. (2002) better leverage of technology can be achieved by understanding technology as an organizational practice, focusing on technology's potential, emphasizing tangible criteria for evaluation and defining people's roles as integrators, not just processors of expertise.

Business model has value in understanding how companies of all sizes can convert technological potential into economic value (Chesbrough, 2003, p. 63). A well constructed business model focuses employees on the activities that really add value (Sandberg, 2002). Business model analyses help to identify customers, define the business's unique value proposition, explain how the value proposition is to be implemented and describe profit patterns, associated cash flows and risks involved in the company's way of doing business. Hamel's definition (2000) of the business model includes four major components (customer interface, core strategy, resources, value networks) and "bridge" –components (customer benefits, configuration, company boundaries) that link them together. Underpinning them are the factors that determine business model's profit potential: efficiency, uniqueness, fit, and additional profit boosters that may include increasing returns and network effects, competitor lock-out, economies of scale and strategic flexibility. A business model should be reevaluated when a new product does not fit the old paradigm, when an old product is entering a new stage of its life cycle or a new technology threatens to disrupt the model's platform, when filling key positions within the firm and when the economy shifts (Sandberg, 2002). When managers operate consciously from a model of how the entire business system will work, every decision, initiative, and measurement provides valuable feedback. (Magretta, 2002). The majority of innovations are developed by innovation users, manufacturers, suppliers and others having a functional relationship with a given innovation (Von Hippel, 1988). Analysis of those relationships by using the business model framework may act as an important source of innovation.

One might consider other determinants of strategy in addition to these eight chosen in this study. For example core competencies (Hamel & Prahalad, 1994) could be included in this list. I however see core competencies more of a result of strategic choice rather than a determinant of it and highlight the need to identify the elements that contribute to each core competence – that is to the determinants of strategy presented in this chapter. Similarly, the role of management and management processes are important, but their role according to my view is more instrumental. They deal with the determinants of strategy that in a cyclical way both define the choice of strategy and are the outcome of it – and will be discussed in detail in the chapters to come.

2.2.2 Strategy and change

The essence of strategy is to ensure profitability and long term survival by creating and sustaining competitive advantages. The strategic discussion today appears to be about the changing basis of sustainable competitive advantage as well as "sustainability" for its own sake, a discussion that inevitably has led strategists to consider more flexible approach to the concept of strategy and finding new ways to respond to change.

Sustainable competitive advantages can be seen to be based on superior skills, superior resources or superior position .(Rumelt, 1980) or rooted in distinctive competencies (McGrath et al., 1994, Barney & Arikan, 2001) which enable a company to pursue a strategy more efficiently and effectively than other firms do. Sustainable competitive advatages allow companies to outperform the average competitor (Porter, 2001) by achieving superior profitability by delivering greater value to customers or by creating comparable value at lower cost, or by doing both (Porter, 1996). Strategic positioning aiming at sustainable competitive advantage comprises of delivering superior long-term return on investment, making an unique value proposition and creating a distinctive value chain reflecting it, making necessary trade-offs, fitting the elements of the company together and providing continuity of direction (Porter, 2001). According to D'Aveni (1994) the four determinants of the company position in relation to its environment depend on competitive maneuvering related to the four arenas of cost and quality, timing and know-how, strongholds and financial resources.

Competitive advantages erode over time. Achieving a unique position is not enough to guarantee a sustainable competitive advantage. A valuable position will attract imitation by incumbents (Porter, 1996). The strategic context is important, because competitive advantage is likely to be more sustainable if it is based on activities that are strategy-specific and that have contextual interactions with other activities (Porter & Siggelkow, 2000). Pressures to grow or apparent saturation of the target market lead managers to broaden the position by extending product lines, adding new features, imitating competitors' popular services, matching processes and making acquisitions. Too often,

the efforts to grow blur uniqueness, create compromises, reduce fit and ultimately undermine competitive advantage (Porter, 1996).

Today there seems to be a growing tendency to treat competitive advantages as temporary and move from one competitive advantage to another faster than the competitors do (Brown & Eisenhardt, 1998, D'Aveni, 1994) rather than sustaining "old" competitive advantages (Porter, 1979). The underlying reasoning is that sustaining an old advantage can eat up resources that should be used to generate the next move (D'Aveni, 1994). Instead of preoccupation with defining defensible product-market positions managers are forced to refocus their attention on developing organizational capability to sense and respond rapidly to change (Bartlett & Ghoshal, 1998). That requires focus on dynamic change and corporate learning as well as the development of corporate capabilities in relation to these two issues (Teece & Pisano, 1994). Whilst competitive advantage may come from size or possession of assets, the pattern is increasingly coming to favor those organizations which can mobilize knowledge and technological skills and experience to create new products, processes and services (Bartlett & Ghoshal, 1998). However, moderation in action is desirable and extreme strategies are to be avoided. Strategy can be made more dynamic by seizing initiatives with a series of small steps (D'Aveni, 1994). Companies should make the most of existing business; stretch out their past success by proliferating their product platforms and extending their offerings into new markets and reach to the future through experiments (Brown & Eisenhardt, 1998). If able to recognize change early enough, established companies can often counter arising competition by taking proactive actions and by shaping technological or market revolution (D'Aveni, 2002a).

The concept of strategy needs to be dynamic and flexible to accommodate changes taking place in the business environment. Rather than aiming at "fit" (Rumelt, 1980) between the strategy and environment companies should build an ability to "stretch" (Hamel & Prahalad, 1994), to proactively respond to change. Essential in doing this is the ability to simplify strategy making. Not so long ago, once formulated, strategy remained relatively stable and aimed at creating and sustaining competitive advantages based on the company position in the marketplace (Quinn, 1980, Rumelt, 1980, Porter, 1979).

Change was incremental, and fundamental change was triggered as major changes occurred in the environment. Romanelli & Tushman (1994) describe this state as a punctuated equilibrium, a tendency of strategies to develop incrementally with periodic transformational change. Today, there are three powerful forces shaping the competitive environment and rewriting the rules of the game: globalization of markets and technology supply, the rise of networking as a business model and the emergence of technologies enabling a "virtual" mode of working (Chesbrough & Teece, 2002, Tidd et al., 2001). The lines separating businesses have become more ambiguous as technologies and markets converge, creating new growth opportunities where traditional businesses intersect (Tapscott et al., 2000, Tidd, 1997, Bartlett & Ghoshal, 1994). Choice of markets and technologies has thus become an increasingly important element of strategy.

Strategic imperatives due to the changing environment include increasing strategic clock speed, focusing on portfolios of different business models, shortening product life cycles, creating go-to-market flexibility, enhancing competitive innovation and managing intra-enterprise cannibalism (Nadler & Tushman, 1999). Having a strategy is a matter of discipline. It requires a long term focus on profitability rather than just growth, an ability to define an unique value proposition, and willingness to make tough trade-offs in choosing what not to do (Porter, 2001). Eisenhardt (2002) and Eisenhardt & Sull (2001) emphasize the need for simple, organizational and temporal strategy, with the most important challenge being the ability to cope with the unpredictable duration of competitive advantages. Strategy can be simplified by compressing the essence of it into a few how-to, boundary, priority, timing and exit rules (Eisenhardt, 1999).

Responding to change: It appears, that the ultimate challenge for today's companies is to reestablish their dominance, regain market share and in some cases ensure their survival (Beer & Eisenstat, 1990). If this is the case then corporate renewal is mandatory – and the companies are left with choosing how to renew themselves. Identified change strategies include reengineering, restructuring, divestiture and outsourcing, and ultimately achieving corporate renewal by building new capabilities. *Reengineering or restructuring* typically include downsizing, overhead reduction, employee empowerment, process redesign and portfolio rationalization. However, restructuring and reengineering may

dilute the company's core competencies (Hamel & Prahalad, 1994). Similarly, *divestiture and outsourcing* can have negative consequences. Companies have an advantage over the market through their social capital which facilitates creation and sharing of new intellectual capital which is essential for sustaining competitive advantages (Nahapiet & Ghoshal, 1999). While divestiture and outsourcing may appear to save costs they may also surrender organizational advantage to the market (Ghoshal, 2000). What may further limit its applicability is the fact that the overwhelming majority of divestitures is done under pressure, that is, too late (Dranikoff et al., 2002). However, when managed properly, a divestiture can help the company to avoid becoming inflexible and thus be a valuable tool for promoting innovation and growth. Finding a balance between focus on core competencies and using divestiture as a strategic tool is essential to the company. While divestiture remains an important tool for defining the strategic scope of the corporation, it should be executed by taking into account the effects on company's core competencies, culture and information flows (Burgelman, 1994, Hamel & Prahalad, 1994, Sandberg, 2001).

The most difficult and according to (Merrifield, 2000) the most viable change strategy is that of continuous *corporate renewal.* According to Meschi & Cremer (1999) corporate renewal is a competence building process which begins with identification and definition of the existing core competencies and an analysis of how they are used and coordinated. After defining the desired future state, strategic objectives are used to formalize the status of existing core competencies and to define the new competencies needed to meet the objectives. Ultimately, strategy implementation requires new vision, a modified attitude of the company towards its competitors, its environment and its own organization. Regardless of whether growth is desired in present or future businesses, a company needs a clear-eyed view of its strategy and its operational capabilities (Chesbrough, 2002). The need for corporate renewal is driven by investor expectations for high returns on existing assets and their demand for growth: new assets and entry into new business arenas (Day et al., 2001). Continuous renewal requires annual incremental improvements in both the value and productivity of current operations, just to maintain cash flows, as well as significant simultaneous investments in "next generation" systems, which are deliberately designed to prematurely obsolete current business operations (Merrifield, 1993).

As an attempt to participate to the ongoing discussion about the change in general and change in the concept of strategy in particular I subscribe to the view that any organization not committed to a process of continuous corporate renewal can be obsolete in relatively few years. But as continuous corporate renewal is indeed difficult to achieve, I dedicate the next chapter to pin-pointing the two key challenges of corporate renewal from established company's point of view.

2.2.3 Challenge of corporate renewal in an established company

According to recent literature the challenges of corporate renewal in established companies appear to root in two major sources: initiating change and executing it.

The challenge of initiating change is related to the failure to identify a need for change which is rooted in organizational history, in management inability to see beyond the current business paradigm and in perceiving change as a risk (Hamel, 2000, Christensen, 1997, Tushman & O'Reilly, 1997, Burgelman, 1983a). In many mature organizations renewal and change appear risky, much more than the status quo (Baden-Fuller & Stopford, 1994). There are several examples of initially successful strategies that became embedded in the policies that tended to refine and defend existing positions rather than exploit new ones, making once facilitating organizations increasingly bureaucratic and compartmentalized, inhibiting both individual initiative and cross-unit learning (Bartlett & Ghoshal, 1995). A key to corporate renewal, therefore, is the capability to identify the need for change and to cross what Dhebar (2001) calls the "chasm within the mind", a gulf between established mental constructs and fundamentally new paradigms. An inability to recognize the need for change relates to the problem of breaking free from existing structures and procedures that are prohibiting change (Hamel, 2000, Ghoshal & Bartlett, 1996). Even though the failure of established firms has been associated with the inability to change technology, the key issue appears to be firms' disabilities in changing strategy, not technology (Christensen & Bower, 1996). Therefore, change efforts are often postponed until the company is in trouble and it is forced to change (Markowich, 1994).

A company's ability to execute change relates to its structure and culture, which in essence are defined by its employees and management alike. A major constraint in any corporate transformational process, and a need for carefully sequenced stages, lies in people's capacity to accommodate change. Therefore, recognized behavioral change is not just an outcome of the transformation process, but its driving engine (Ghoshal & Bartlett, 1996). Ghoshal & Bartlett (1995, 1996) suggest that corporate renewal efforts should focus on two key issues: developing particular organizational capabilities in an appropriate sequence and recognizing that the transformation is as much a function of individual behavior as it is of strategies, structures and systems. According to them, successful transformation is linked to improving the following two core capabilities: the strength of each of its component units and the effectiveness of their integration. "Programmatic", top-down driven change programs often fail to achieve fundamental and sustained corporate renewal. (Beer & Eisenstat, 1990, Burgelman, 1983a, Hart & Berger, 1994). A reason for their failure relates to corporate culture, which according to Mezias & Glynn (1993) may have a more important role in defining corporate renewal capability than formal organizational structures and systems. Therefore, change in company hardware (business configuration and structure) needs to be supported by rebuilding its software, the behavioral context consisting of motivations, values and the commitment of employees (Ghoshal & Bartlett, 1995, 1996). Another challenge in initiating change relates to the magnitude and speed of change. The problem with most companies that have failed in their transformation efforts is not that they have tried to change too little, but that they have tried to change too much (Ghoshal & Bartlett, 1996), not that they have changed too slow but that they have changed too fast (Grove and Burgelman, 1996).

Identifying the initial challenges related to corporate renewal is the first step into achieving it. The next steps are however more difficult: that is institutionalizing change. In today's business environment companies need to continuously reevaluate their strategies and adjust them to sustain their existing competitive advantages and to build new ones. Thus corporate renewal, at heart, is a strategic activity which is enabled by the support of corporate structure and culture. This study proposes that in order to institutionalize change, corporate renewal can not take place through separate change programs but instead needs to be embedded in the strategy processes of a company.

2.2.4 Induced strategy: processes of formulation and implementation

Studies of corporate strategy have traditionally divided the strategy process into two key phases: strategy formulation and strategy implementation. This study considers these two processes as the ones encompassing the *induced* or in other words intended, deliberate and purposeful management of strategy. Strategy formulation and implementation are separate and distinguishable, yet complementary and interdependent parts of the strategy process (Hrebiniak & Joyce, 2001). In real life, the two processes are intertwined, complex and interactive in nature (Mintzberg et al., 1998, Johnson & Scholes, 1999). In this study strategy formulation and strategy implementation are presented as logically separate phases of the strategy process. This logical separation helps to map and analyze the more recently identified processes that all contribute to these two core elements of the induced strategy process.

Strategy formulation: This study sees strategy formulation as a process comprising of purposeful attempts to ensure company success in the long term. It begins with an evaluation of the array of possible directions and ends in a choice of direction. Its role in achieving corporate renewal is related to management ability to recognize and articulate needed changes in the business environment, and the formalization of strategies emerging through the strategy formation process which will be discussed later in this study.

Well established views of strategy formulation include Andrews' (1980) definition of it as a process of deciding what to do while taking into account the opportunity and risk in the company environment and relating these to company resources, values and responsibilities. Rumelt (1980) stresses the importance of strategy evaluation, that is checking whether the objectives and major policies and plans are appropriate and verifying the critical assumptions on which the strategy rests in order to formulate or adjust strategy. In a similar vein, Johnson & Scholes (1999) describe strategy formulation through the processes of strategic analysis and strategic choice. Strategic analysis is concerned with understanding the strategic position of the company in terms of its external environment, internal resources and competencies and the expectations and influence of stakeholders. Strategic choice involves understanding the underlying phases

guiding future strategy, generating strategic options for evaluation and making a selection. Dranikoff et al. (2002) enhance the view of strategy formulation by concluding that in addition to entering new businesses and building new competencies, strategy formation involves decisions about how to redeploy or shed competencies associated with the businesses that are no longer within the company's strategic scope. They suggest that regularly divesting businesses, even some good healthy ones, ensures that the remaining units reach their full potential and the overall company grows stronger and conclude that companies that actively manage their business portfolios through acquisitions and divestitures are found to create substantially more shareholder value than those that passively hold their businesses.

Recent research of corporate strategy has identified several other processes that focus on strategy formulation in changing conditions. Burgelman (1994) and Grove & Burgelman (1996) note that while aligning corporate strategy and strategic action is important, in dynamic industries, this alignment is not likely to last. This divergence between intent and action causes "strategic dissonance" and creates a need to formalize decisions already taken at the lower levels of the organization. The processes of strategic business exit (Burgelman, 1994) and strategic recognition (Grove & Burgelman, 1996) relate to formalizing strategies resulting from autonomous strategy formation. Furthermore, Burgelman & Doz (2001) note the need for multi-business corporations to develop new strategy-making capabilities, namely strategic integration. This involves more fully exploiting growth potential by combining resources and competencies from business units and directing those units toward new business opportunities that extend the existing corporate strategy. Strategic integration depends on two dimensions: scope (fit with the existing corporate strategy) and reach (needed change in existing corporate strategy). According to Burgelman, successful strategic integration is complex in nature; it is about finding the right balance over time between reinforcing the core and redirecting strategy, as well as managing the sharing and transferring of resources among business units.

Increasing speed and magnitude of change have increased the number of strategic options available for the firm and created pressure for faster decision making. The process of pattern recognition (Slywotzky & Morrison, 2000) anticipates how and why a company's

strategic landscape changes and connects symptoms to causes. Eisenhardt (1999) recognizes the need to make superior (fast, high-quality, widely supported decisions) by improving the process of strategic decision making. That is seen to involve building collective intuition, stimulating quick conflict, disciplining the timing of strategic decision making and defusing politics by emphasizing common goals and clear turf. Cross-business synergies deal with the relationships among and between business units and their corporate parent. Such synergies are rooted in economies of scope, market power and internal governance advantages (Martin & Eisenhardt, 2001). Three processes become particularly important to synergies as market dynamics increase: knowledge transfer, co-evolving and patching. Of these knowledge is related to strategy implementation. Co-evolving (re-linking) is about continuously creating new linkages between businesses to exploit new opportunities and dropping those linkages that are deteriorating. Patching is the corporate level process of adding, splitting, transferring, exiting or combining chunks of businesses, whereby corporate managers remap or reconfigure businesses in accordance with changing market opportunities (Brown & Eisenhardt, 1998, Martin & Eisenhardt, 2001).

In addition to the processes mentioned above, there are other sub-processes that relate to strategy formulation. Worth mentioning are event pacing and time pacing (Eisenhardt & Brown, 1998, Brown & Eisenhardt, 2000). Event pacing is a reactive process. It is about creating a new product when a promising technology comes out of the R&D laboratory, entering a new market in response to a move by a competitor, or making an acquisition because an attractive target becomes available. In contrast, time pacing is a proactive process. It involves creating new products or services, launching new businesses or entering new markets according to the calendar. Effective time pacing requires managing transitions from one phase to another and managing the rhythm of change. In addition, the process of strategy vectoring (Burgelman, 2002a, 2002b) compares strategy making to a vector, a quantity of having direction and magnitude, denoted by a line drawn from its original to its final position. In essence it is about driving a company into an intended direction with a total force equal to all the forces at its disposition.

The Table 3 summarizes some of the processes underlying strategy formulation that have been identified by the recent literature reviewed as a part of this study.

Process	Content	Source
Strategy formulation	Deciding what to do while taking into account opportunity and risk, company resources, values and responsibilities	Andrews, 1980
Strategy formulation	Evaluating current corporate strategy	Rumelt, 1980
Strategic analysis	Understanding the strategic position of an organization	Johnson & Scholes, 1999
Strategic choice	Formulation and evaluation of the possible courses of action	Johnson & Scholes, 1999
Portfolio management	Active management of acquisitions and divestitures	Dranikoff et al., 2002
Strategic business exit	Formalizing the autonomous actions leading to a business exit	Burgelman, 1994
Strategic recognition	Recognizing autonomous managerial initiatives	Grove & Burgelman, 1996
Complex strategic integration	Formalizing patterns of autonomous strategic initiatives	Burgelman & Doz, 2001
Pattern recognition	Anticipating how and why competitive landscape is changing	Slywotzky & Morrison, 2000
Strategic decision making	Making superior (fast, high quality, widely supported) decisions by using collective intuition, conflict, timing and defusing politics	Eisenhardt, 1999
Time pacing	Scheduling change at predictable time intervals	Eisenhardt & Brown, 1998 Brown & Eisenhardt, 2000
Event pacing	Taking strategic action as a response to an external or internal event (new technology, competitor move, etc.)	Eisenhardt & Brown, 1998 Brown & Eisenhardt, 2000
Patching	Continuously realigning business with emerging opportunities	Brown & Eisenhardt, 2000 Martin & Eisenhardt, 2001
Co-evolution	Changing the collaborate links and relationships among business units to exploit changing market opportunities	Martin & Eisenhardt, 2001
Strategy vectoring	Aligning strategy and action	Burgelman, 2002

Table 3 Examples of processes that underlie strategy formulation.

Strategy implementation: Alongside the process of strategy formulation strategy implementation is an important part of the induced strategy process and as such an important contributor to corporate renewal. Without an effective strategy implementation process attempts to renew the company emerging through strategy formulation and formation processes remain ineffective. Strategy implementation is an important, but difficult task (Hrebiniak & Joyce, 2001). Difficulties in the strategy implementation process relate to the facts that implementation usually takes more time than strategy formulation, involves a large number of people and complex tasks, and requires sequential and simultaneous thinking. Energy generated by the renewal must be

channeled and orientated, or it will rapidly lose its vitality and drift away without producing any of the desired effects (Meschi & Cremer, 1999).

Definitions of the process of strategy implementation include Andrews' (1980) view of it as a process concerned with defining the organizational structure and relationships, the organizational processes and behavior and the leadership role. In a similar vein, Johnson & Scholes (1999) define strategy implementation as a process which translates strategy into organizational action through organizational design, resource planning and management of strategic change. Quinn & Voyer (1994) enhance these views by introducing the process of strategic integration, which concerns strategy implementation by concentrating on a few key thrusts that draw the firms' actions together and help to maintain focus and consistency. In addition, strategic integration is about selecting people and managing coalition forming to the desired direction.

Other authors emphasize the importance of people and culture over structures. Bartlett & Ghoshal (1995) and Ghoshal & Bartlett (1996) conclude that successful transformation requires rebuilding of the behavioral context of the company. Discipline, support, trust and stretch are the four elements for establishing a behavioral context that rejuvenates the company. These elements are most effectively developed sequentially to support the three stages of renewal: simplification, integration and regeneration. Simplification improves productivity by simplifying tasks, focusing attention, building discipline, overcoming resistance and embedding support in the organization. Integration creates stretch and trust to motivate vital cross-unit collaboration. Regeneration maintains momentum in the ongoing transformation process. According to them, there are two management tasks that play a central role in the development of self-renewing organizations. The first is the ability to integrate the entrepreneurial performance-driving behavior shaped by the contextual elements of discipline and support with the equally vital cross-unit integrative learning framed by the managerial characteristics of stretch and trust. The second, somewhat countering task, is to ensure that these basic contextual elements are kept in a state of dynamic desequilibrium to ensure that the system never becomes locked into a static mode of reinforcing and defending its past.

In addition, there are processes that link to strategy implementation. The process of developing strategic continuous improvement capability (Bessant & Francis, 1999) involves acquiring and embedding key behaviors and is essentially a learning process. Achieving continuous improvement involves linking problem-finding and solving behavior to the strategic goals of the organization. This requires the development of appropriate enabling mechanisms for policy development and deployment and embedding monitoring and measuring behavior within the organization. Furthermore, knowledge transfer has an important role in the creation of cross-business synergies (Martin & Eisenhardt, 2001). It takes place through deployment of experience, skills, information and routines, and thus can be classified as an implementation process.

The Table 4 summarizes some of the strategy implementation processes that have been described by the recent literature.

Process	**Content**	**Source**
Strategy implementation	Designing organizational structures, relationships, processes and behavioral and managerial context	Andrews, 1980
Strategy implementation	Translation of strategy into organizational action through organizational structure design, resource planning and the management of strategic change	Johnson & Scholes, 1999
Strategy integration	Concentrating on a few key thrusts and managing coalition formation	Quinn & Voyer, 1994
Rebuilding behavioral context	Carefully phased transformation through the processes of simplification, integration and regeneration	Ghoshal & Bartlett, 1995
Development of strategic continuous improvement capability	A learning process which monitors the deployment of strategy by monitoring and measurement against strategic objectives	Bessant & Francis, 1999
Knowledge transfer	Deployment of experience, skills, information and routines	Martin & Eisenhardt, 2001

Table 4 Examples of processes that underlie strategy implementation.

This chapter has introduced the induced strategy processes, strategy formulation and strategy implementation, and summarized some of the processes that are seen to fall into these two categories. In addition, this study identifies the need for autonomous strategy development – that is the essence of autonomous strategic initiatives taking place outside the current corporate strategy as an organizational response to changing conditions. The

next chapter enhances the scope of corporate renewal to unintended and autonomous direction needed to complement the *induced* strategy processes.

2.2.5 Autonomous strategy: the process of strategy formation

This study identifies strategy formation as the third core element of the strategy process (Burgelman, 1983a, Mintzberg et al., 1998) and defines it as action taking place as a response to changing conditions. This autonomous strategic behavior emerging in the course of operating business is a major source of corporate renewal (Burgelman, 1983a). Also Mintzberg (1987b), Quinn & Voyer (1994) and Grove & Burgelman (1996) note the importance of strategy formation at the operational levels of the organization as a response to changing conditions.

Burgelman (1983a, 1983b, 1983c) divides strategic activities into two categories: the ones that are induced by the firm's current concept of corporate strategy and the autonomous ones that fall outside the scope of current strategy. According to him, strategies form through the interaction of strategic behavior, corporate context and the concept of strategy. His studies of evolutionary processes taking place in the company (Burgelman, 1994) conclude that the long term survival of the firm depends, in part, on the firm's ability to use inter-organizational ecological processes, internal selection and retention, to generate new businesses and to change the mix of businesses in which they compete. In a similar vein, Mintzberg (1987b) describes strategy formation as crafting which according to him is a process that builds on an umbrella strategy defined by the senior management. The umbrella strategy encompasses broad guidelines and leaves the specifics to be defined at the lower levels of the organization. By using this approach, the company achieves a combination of a deliberation and control, with flexibility in strategy formation en route.

Quinn & Voyer (1994) conclude that real strategy evolves as internal decisions and external events flow together to create a new, widely shared consensus for action. They describe strategy formation as a process of logical incrementalism, the management of which is about being ahead of the formal information system. They suggest building organizational awareness and encouraging variation by building credibility, legitimizing

new viewpoints, making tactical shifts, broadening political support, overcoming opposition and structuring flexibility. They conclude that strategy formation is a non-linear, continuous process, and that the real challenge of managing incrementally is to ensure continuing dynamics and mutating consensus. According to Grove & Burgelman (1996) strategic dissonance emerges in an organization due to changes in the basis of competitive advantage, company competencies, corporate strategy, strategic action and the internal selection environment which lead to divergence between articulated strategies. To ensure strategy formation through the process of strategic dissonance, top management must help to ensure that the internal selection environment of the company continues to reflect the real competitive pressures of the external environment. They must value dissent, deploy resources to respond to early signs of strategic dissonance and support new initiatives before strategic dissonance emerges.

The Table 5 summarizes some of the processes through which strategy formation takes place.

Process	**Content**	**Source**
Autonomous strategic behavior	Strategy formation through interaction of strategic behavior, corporate context and the concept of strategy	Burgelman, 1983abc
Strategy crafting	Strategy formation in the context of an umbrella strategy and in-built flexibility for strategic evolution	Minzberg, 1987b
Logical incrementalism	Blending analysis, organizational politics and individual needs into a cohesive new direction	Quinn & Voyer, 1994
Internal selection and retention	Intra-organizational evolutionary processes through which autonomous initiatives gain momentum	Burgelman, 1994
Strategic dissonance	Autonomous adaptation to changing conditions	Grove & Burgelman, 1996

Table 5 Examples of processes that underlie strategy formation.

2.2.6 Conclusions of the theories about strategy and corporate renewal

This chapter aimed at explaining the factors that influence corporate renewal. It proceeded by introducing the theoretical traditions related to strategy research, explained the basis for defining the determinants of strategy and approached the concepts of strategy and change to enhance the understanding of the challenges of corporate renewal in an established company. After setting the scene for continuous corporate renewal it

proceeded to describing the processes through which it takes place in terms of both induced and autonomous strategy processes. The conclusions of theories of strategy and corporate renewal are summarized as:

- There are a number of theoretical traditions related to studying corporate strategy. Rather than choosing an approach up-front, the approach in this study was to describe the different approaches at this point to provide basis for analyzing the results of this study, and leave them to be discussed later in this study.
- This study identifies industry, location, market, technology, business model, resources, knowledge and corporate structure and culture as the most important determinants of strategy.
- Corporate strategy is evolving to accommodate the change taking place in today's business environment in which competitive advantages are more difficult to sustain. A corporation may choose to restructure itself, to downsize or to focus on building corporate renewal through innovation. Of these strategies corporate renewal appears to provide the best potential for sustaining competitive advantages.
- The key challenge related to corporate renewal in an established company is its ability to initiate and execute change. Difficulty in initiating change is rooted in organizational history which tends to reinforce the "status quo" and perceives change as a risk. The most important limitation in executing change relates to people and their ability to accommodate change.
- This study concludes that in order to be continuous, corporate renewal needs to be embedded in the strategy processes of a company. This study highlights the importance of induced strategy processes: strategy formulation and strategy implementation. In addition it identifies autonomous strategy making through the process of strategy formation as the mechanism through which continuous corporate renewal takes place.

2.3 Theories of innovation

The previous chapter set the scene for continuous corporate renewal. It concluded that companies need to continuously monitor change and indeed institutionalize change in their strategy processes. This chapter approaches corporate renewal from the viewpoint of innovation management and considers the different issues needed to successfully use innovation as a source of continuous corporate renewal.

2.3.1 Needed: An innovation strategy

This study highlights the need for an overall innovation strategy. It sees innovation strategy as a core element of corporate strategy which plays an important role in defining the ability for corporate renewal. While corporate strategy is concerned with the overall direction of the company innovation strategy shapes the actions taken within those guidelines. Based on the literature presented in this chapter this study concludes that innovation has potential to be a rich source of competitive advantage, but in order to harvest the benefits, strategic management of innovation is needed. This chapter proceeds through presenting the characteristics of an innovation strategy as well as the elements that need to be taken into account when managing it.

The need of innovation strategy has been recognized by a number of studies. Covin & Miles (1999) conclude that innovation *per se* is insufficient to define a success of a company It is relatively simple to succeed once, but sustaining success requires active and purposeful management of innovation (Hamel, 2000, Tidd et al., 2001). Furthermore, management of innovation is inherently difficult and risky: most new technologies fail to be translated into products and services, and most new products and services are not commercial successes (Tidd et al., 2001). Therefore, managing innovation is imperative. An innovation strategy is needed to establish a linkage between company capabilities, customer and market demands, and technological possibilities (Martensen & Dahlgaard, 1999) and to evaluate existing innovation investments ruthlessly, and cut off those that do not have a clear strategic purpose (Pearson, 2002). Its role is to ensure fit between innovation and the overall corporate strategy and structure, their technology, skills,

resources and organizational commitments (Quinn, 1985) and to be compatible with the nature of technological opportunities if these are to be effectively exploited (Tidd et al., 2001).

Characteristics of an innovation strategy: This study's view of competitive innovation management involves several key elements: continuity, simultaneous management of different types of innovation as well as increasingly open attitude towards innovation. *Continuity* is about active shaping of innovation streams which enables companies to take advantage of fundamentally new markets for existing technology and proactively introduce substitute products, which, even though they cannibalize existing products, create new markets and competitive rules (Tushman & O'Reilly, 1997).

Simultaneous management of different types of innovation involves managing both the steady state of "doing what they already do better" and the radically new generations (Tidd et al, 2001) while taking into account the context in which innovation takes place (Tidd, 2001). As a response most companies work on a portfolio of innovations (Tidd et al., 2001, Wheelwright & Clark, 1992). Some of the innovations represent incremental developments and improvements on existing and proven products and processes, whilst others focus on more radical change. Therefore, a key skill in effective innovation management is balancing the composition of this portfolio and matching it to the firm's competencies and capabilities in technology and markets. Recognizing the different types of innovation and the need to manage them differently should be the basis for an innovation strategy (Christensen & Bower, 1995, Rice at al., 1998). Innovation strategy needs to focus on simultaneous development of markets and technologies, as well as products and processes. Tidd et al. (2001) note that technological innovation is not valuable as such, but needs to be accompanied by market innovation. Simultaneous product and process innovation is a rich source of competitive advantage. The factors underlining the importance of process development in high-tech industries include shorter product life-cycles, increasingly hard to manufacture designs, fragmented and demanding markets and growing technological parity (Pisano & Wheelwright, 1995).

Furthermore, innovation strategy is about *increasing openness* which involves also exploiting rapid diffusion of knowledge and open attitude towards innovation. Instead of focusing inventing new knowledge internally good research practice also involves accessing and integrating external knowledge (Chesbrough, 2003).

Strategic management of innovation is needed to move efficiently from invention (idea) to the market. It involves various aspects: market innovation, simultaneous product and process innovation, optimizing the use of corporate resources and carrying out development efficiently. To lead to competitive advantage technological innovation needs to be complemented with *market innovation* (Tidd et al., 2001). The process of converting technological innovation into market innovation is not simple, but requires close interaction with researcher and the marketplace, fortitude by business leaders and incredible perseverance by the members of the development team (Norling & Stats, 1998). In addition, *simultaneous product and process innovation* is a rich source of competitive advantage (Pisano & Wheelwright, 1995). It can help companies to lower manufacturing costs and harvest benefits as a result of accelerated time to market for new products like rapid production ramp-up, enhanced product functionality and customer acceptance as well as a stronger proprietary position.

Optimized use of corporate resources in terms of new product development include managing single projects, product families and platform products, and core competencies or core capabilities (Baker & Hart, 1996, Hamel & Prahalad, 1996, Meyer & Utterback, 1993). Exploiting synergy among projects by fostering commonality and reuse of design solutions over time allows companies to build a stronger competitive position (Chapman et al., 2001, Meyer & Utterback, 1993, Wheelwright & Clark, 1992). To achieve the desired results resource allocation should be managed at the corporate level by using an aggregate project plan, a tool mapping the innovation projects based on the amount of resources they consume and how they will contribute to the firm's product line (Wheelwright & Clark, 1992). In addition, e*ffective and efficient product development* is a rich source of competitive advantage. A speedy execution allows a company to choose between a number of strategies. It may start a project at the same time as competitors but bring the product faster to the market. It may delay the start to gain more information,

and still reach the market at the same time as the competitors, but with a better product. Furthermore, it may develop additional products to serve specific customer niches. While succeeding with rapid execution of a project may yield competitive advantage once, real competitive advantage derives from the capability to execute effective development consistently, in a series of projects over time (Wheelwright & Clark, 1994).

This chapter underlined the need for an innovation strategy and identified the essential characteristics. In addition it highlighted the need for strategic management of innovation which can help a company to better create and sustain competitive advantages. The following chapter focuses in more detail on specific challenges of innovation management from an established company's perspective.

2.3.2 Challenges in managing innovation

This chapter builds on the need to establish an innovation strategy that was presented in the previous chapter. It divides the specific management challenges in three main categories. Firstly it considers the importance of managing the innovation context. Secondly it highlights the need to manage innovation as a process, not as a single act. Finally it looks at the challenge of improving the innovation performance of a company. The conclusion regarding all these management challenges is that even though innovations are born out of creativity they fail to add value if not pursued systematically (Drucker, 2002, Pearson, 2002, Tidd et al., 2001). Thus the real challenge of innovation is not invention, inspiration, or coming up with good ideas – the hard part is making them work technically and commercially (Drucker, 2002, Levitt, 2002). Effective innovation management is about discipline: recognizing innovation as a process not as a single event and managing it as such (Tidd et al., 2001) – the context, the process and the performance.

The innovation context involves a number of factors. The design attributes for an innovative organization include organic and modular structure and decentralization (Damanpour, 1991, Galunic & Eisenhardt, 2001, Mintzberg, 1979, Rice et al., 1998, Tidd et al., 2001). In addition, in-built "slack" (Amabile, 2002, Damanpour, 1991, Ghoshal, 2000, Hamel, 2000, Tidd et al., 2001), and definition of social rules (Dougherty et al.,

2002) have been found to support innovation. Innovation is closely related to corporate entrepreneurship which according to Hornsby et al. (1993) can be fostered by a reward system, dedicating management support and resources, choosing an organizational structure and building ability for risk taking. This study sees the management of the innovation context of a company as a task that links closely to corporate strategy and thus highlights the importance of the five first determinants of strategy (industry, location, resources, knowledge, structure and culture) as means to manage it. The other determinants of strategy: market, technology and business model are identified as the components of innovation and seen to horizontally link to the corporate context. The following Figure 6 illustrates the relation between corporate context and components of innovation that together define a company's innovative capability and form the innovation context – the basis on which competitive advantages are built.

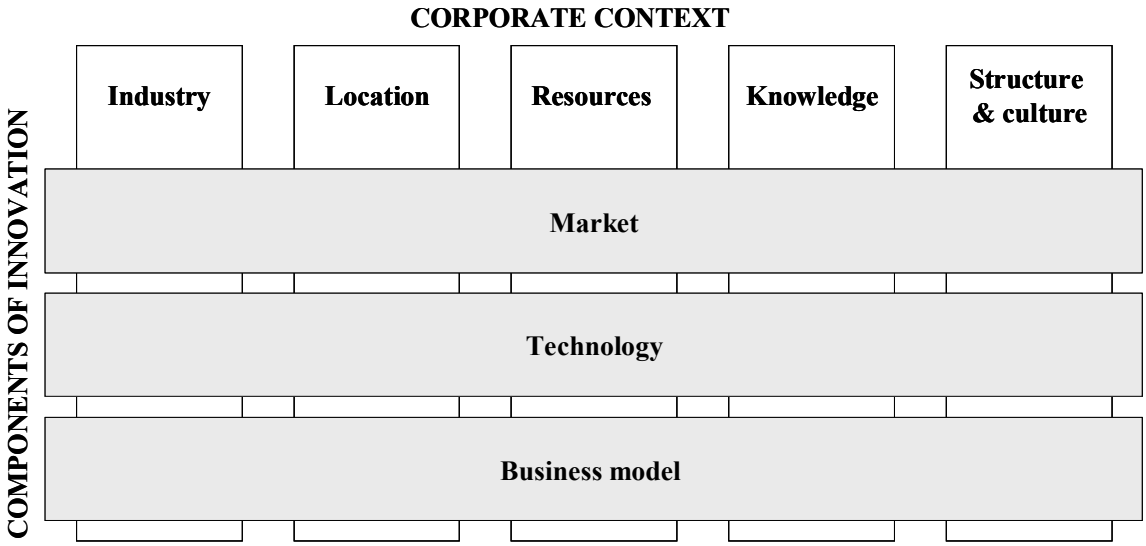

Figure 6 Components of innovation and their relation to the corporate context which define a company's innovative capability and form the basis on which competitive advantages are built.

Management of the innovation process is an extremely demanding discipline requiring real-time coordination and integration of multiple skills and resources that are continuously changing and often geographically dispersed (Merrifield, 2000). Management cannot ensure innovation success but can improve its odds (Van de Ven et

al., 1999, p.11). Management of innovation includes finding the right people, establishing the right roles and processes, setting goals and relevant measures, and reviewing progress at every step (Drucker, 2002). In addition it involves developing and using effective implementing mechanisms, structures and a supporting organizational context for innovation, as well as building and maintaining effective external linkages (Tidd et al., 2001).

Managing innovation as a process involves understanding that innovation is not a one time event, but a high risk, exceedingly complex, interactive, distributed, non-linear sequence, in which new ideas can arise at any point in a progressive chain of discovery, scale-up, production, and marketing, and then feed back to earlier stages, often resulting a redirection of the original thrust of the program (Merrifield, 2000). In a similar vein, Van the Ven et al. (1999) characterize innovation as a journey, a nonlinear cycle of divergent and convergent behaviors that may repeat itself over time and reflect itself at different organizational levels. Making innovation happen, moving from idea through to successful products, services or processes, involves managing "the development funnel" which is illustrated in Figure 7 (Burgelman et al., 2001, Tidd et al. 2001, Wheelwright & Clark, 1993). It represents a gradual process of reducing uncertainty through a series of problem-solving stages, moving through the phases of scanning and selection into implementation, and linking market and technology-related streams along the way (Tidd et al., 2001).

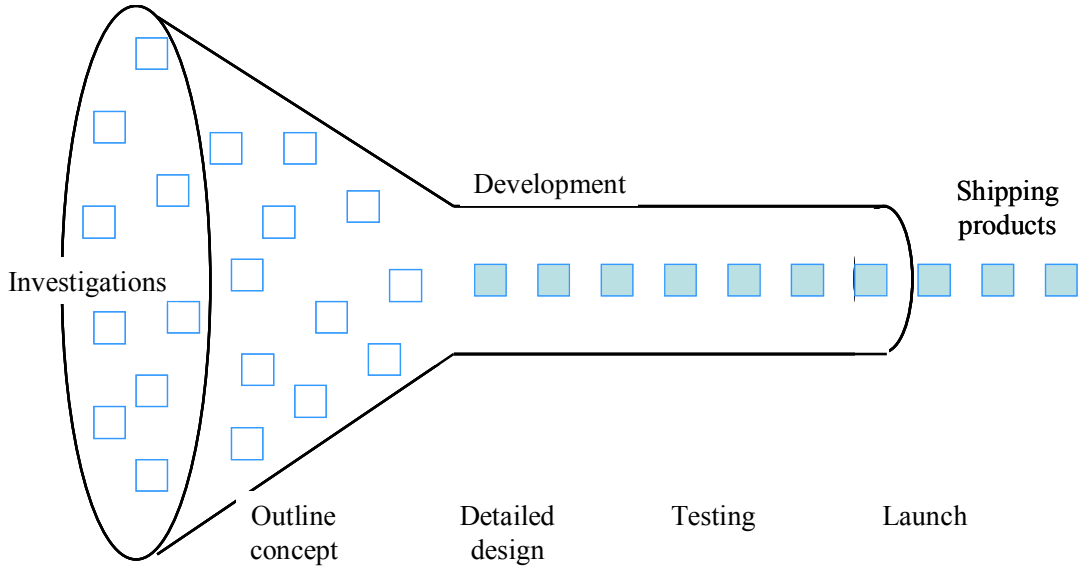

Figure 7. The development funnel (Burgelman & al., 2001)

The process of innovation can be defined as a process that consists of combined activities leading to an innovation (Burgelman et al., 2000). Purposeful, systematic innovation begins with the analysis of the sources of new opportunities and continues by working out analytically what the innovation has to be to satisfy an opportunity (Drucker, 2002). It is a process of finding ideas, assessing them and developing them further. Summarizing the views of recent research, this study distinguishes between the following phases of the innovation process.

- **Finding ideas** relates to encountering products and ideas that can be investigated. The process is seen to include idea generation (Christiansen, 2000), strategy development and ideation (Buggie, 2001) and signal processing and strategy development (Tidd et al., 2001).
- **Assessing ideas** involves picking a number of ideas for further development. It relates to funding (Christiansen, 2000), evaluating (Buggie, 2001) and resourcing (Tidd et al., 2001). Companies should not however be too limited when assessing ideas. According to Van de Ven et al. (1999, p. 93) actions taken without clearly understanding the range of possible outcomes is likely to be critical for the early development of truly innovative ideas.
- **Development** (Christiansen, 2000) or implementation (Buggie, 2001, Tidd et al., 2001) consists of developing ideas into marketable products and services. This part of the innovation process can be characterized as a learning process focused on problem solving through phases of design, build and test (Wheelwright & Clark, 1994).

Tidd et al. (2001) conclude that an important element of the innovation process is the opportunity to learn along it and to improve the ways in which the process is managed. This study sees systematic management of innovation process as a necessity for improving the innovation performance of a company.

Improving innovation performance of a company may involve changes in the process or enhancing the scope of innovation. Christiansen (2000) highlights the importance of *the process*. According to him it is essential to focus on each part of the process, making simple changes first and taking advantage of the expertise that outsiders can provide to accelerate the change process. A starting point for the process improvement should begin by a definition of the desired outcomes for change which typically relate to improving the fit with customer needs and increasing the speed or reducing the cost of the innovation process. Another way of improving the innovation performance is to *enhance the scope of innovation*. It may involve enhancing the scope of systematic innovation beyond individual products to product families and platforms, and the underlying core competencies and as a result to speed up product development. To achieve this Meyer & Utterback (1993) suggest longer term planning of, and financial commitment into, the development of core competencies and multifunctional design teams that stay together for longer.

The first two chapters considering innovation management have built an understanding of the need for an innovation strategy and of the key challenges of systematic innovation management. The next chapter moves the discussion in a practical level and describers briefly the strategic alternatives available for established companies.

2.3.3 Strategies for innovation

In today's changing business environment established companies can choose between a number of strategies for innovation. They can try to pursue innovation by attempting to change the competencies and culture within the existing organizational structure and processes, by acquiring an organization that has the necessary competences, or by developing a strategic organization within itself with different structures, processes and cultures (Christensen, 1997). In addition, strategic alliances are an increasingly common innovation strategy to provide the required flexibility under changing conditions (Eisenhardt & Schoonhoven, 1996). The choice of strategy is increasingly dependent on the environment in which companies operate. According to Christensen et al. (2002)., integration may be a competitive disadvantage in terms of speed, flexibility and price.

This study focuses on four main innovation strategies: R&D activities taking place in the context of existing business, mergers and acquisitions, strategic alliances and corporate venturing. Even though mergers and acquisitions are not within the scope of this study, they are described briefly to build an understanding of their role in the innovation context. Innovation in the form of R&D taking place in the existing corporate context and through corporate venturing will be described in detail later in this study.

Mergers and acquisitions: This chapter summarizes the motives for the pursuit of a strategy of mergers and acquisitions and the risks involved in it. In addition, it describes the most important environmental and organizational contingencies as well as the process by which mergers and acquisitions are realized. *Motives* for mergers and acquisitions include achieving economies of scale and scope, increasing market power and competitiveness in global markets, achieving "fast-growth" and leading or dominating markets (Hitt et al., 2001a, Tidd et al., 2001). In addition, in dynamic industries, a common motive for acquisitions is an attempt to fill holes in a product line, open new markets and create new capabilities in less time than it would take to build business internally (Frick & Torres, 2001, Tidd et al., 2001). Mergers and acquisitions remain a *high risk strategy,* and in some cases may result in the unintended consequence of reduced innovation (Hitt et al., 2001a). Tapscott et al. (2000) observe that the negative consequences of an acquisition can be the reduced value of the acquiring company and ending up with unnecessary baggage, as the leveraging of acquired capabilities can be difficult and costly. The most important contingencies seem to be the characteristics of the technology and the organizational inheritance (Tidd et al., 2001). Critical in harvesting the desired benefits appears to be the existence of complementary resources – that is different but mutually supportive resources of the acquiring and target firm. Integrating complementary rather than highly similar resources through an acquisition increases the probability that the newly created firm will be able to create economic value (Hitt et al., 2001a).

Also the *process* through which mergers and acquisitions are realized matters. It involves developing clear strategic goals for the company as a whole, undertaking only transactions that can advance those goals, making transactions quickly and efficiently and

weaving these transactional capabilities into operations are the factors contributing to a successful transaction and learning from undertaken acquisitions (Frick & Torres, (2001). In a similar vein, Hitt et al. (2001) suggest that effective acquisition should begin with clear goals and to be followed by a due diligence process, which includes careful examination of the company's market position, financial state, the resources available to it and the like (Hitt et al., 2001). It appears that successful companies maintain a steady flow of deals and develop clear management processes to identify and extract value from them – and invest goodwill, cooperation and planning to each acquisition (Frick & Torres, 2001, Hitt et al., 2001).

The importance of **strategic alliances** as an innovation strategy is increasing. It is based on complexity and uncertainty related to industry structures, global markets and technologies have increased to the point that competing autonomously is no longer an option (Doz & Hamel, 1998, Inkpen, 2001). This chapter summarizes the motives for cooperation and its desired benefits. In addition, it describes some of the organizational issues, as well as the management challenges and processes related to cooperative arrangements. *Motives* for strategic alliances relate to the fact that few companies alone can hold captive all the skills and resources needed to exploit basic findings or justify the long-term negative cash flows involved in their development, scale-up and commercialization (Merrifield, 1993). Finding ways for two or more companies to actively share ideas, technologies and other capabilities early and often is the best way to protect projects from the swings of interest and funding that inevitably occur in the individual organizations (Wolpert, 2002). Doz & Hamel (1998) list the motives to form alliances as co-option, co specialization, learning and internalization. *Benefits* of alliances involve helping firms to conserve and pool resources and thus gain economies of scale and scope, share and reduce risks, serve as signals of enhanced legitimacy and create opportunities for gaining new competencies, complementary skills and market power. In addition they can accelerate the time required for development and allow movement into new markets and technologies more quickly (Eisenhardt & Schoonhoven, 1996, Inkpen, 2001, Merrifield, 1993, Tapscott et al., 2000).

The *organization* of alliances is determined by the motives and preferences of the partners, but constrained by the nature of the technologies and markets, specifically the complexity and tacitness of knowledge. A collaborative mindset doesn't just happen. It takes a lot of work to create and ongoing effort to maintain (Sandberg, 2001). Dussauge & Garrette (1999) point out that strategic alliances fall into two main types based on the competitive position of the parties involved. The first type is formed between non-competing firms. They include growth and expansion options, international expansion joint ventures, vertical partnerships and cross-industry agreements. The second type, alliances between competitors, includes shared-supply, quasi-concentration alliances and complementary alliances. There are several factors underlying the *success* of strategic alliances. According to Tidd et al. (2001) it depends on a number of factors but organizational issues dominate, such as the degree of mutual trust and the level of communication. These relate to the initial design of the alliance and the way the alliance is managed over time. Baradacco (1991) describes the alliance management challenge as a process which begins with a clear understanding of companies' current and desired future capabilities; considers a wide range of possible alliances; scrutinizes the values, commitment and capabilities of prospective partners; and understands the risks of opportunism, knowledge leaks and obsolescence before committing to an alliance. According to him, companies should avoid undue dependence on alliances and structure them as separate companies. Trust between partners is a requisite for learning, which may require changes in core operations and traditional organizations. Overall, he notes that leadership is the most important determinant of the success of an alliance. Alliances involve uncertainty about the partner's actions that contribute to the complexity of alliance management and often create significant control and administrative costs (Inkpen, 2001). However, in contrast to the transaction cost theory, dynamic market conditions and emerging markets appear to increase alliance formation, not decrease it (Eisenhardt & Schoonhoven, 1996, Blomqvist, 2002). According to Eisenhardt & Schoonhoven (1996) difficult market conditions and risky firm strategies, combined with a strong social position; increase the rate of alliance formation, despite the high transaction costs associated with them.

Management processes seem to matter too. Inkpen (2001) identifies technology sharing, alliance-parent interaction, personnel transfer and strategic integration as the critical processes of alliance formation. Other core processes embedded in alliance management are knowledge management and learning (Baradacco, 1991, Doz & Hamel, 1998, Inkpen, 2001). Strategic alliances are dynamic in nature. The manner in which value is created is not preordained but instead the relationship evolves over time. Therefore, in the long term, managing the alliance relationship and the ability to adapt to change are more important for success than the initial design (Doz & Hamel, 1998).

Concluding the literature about strategies for innovation, established companies can choose between in-house R&D, mergers and acquisitions, strategic alliances and corporate venturing. The Figure 8 illustrates the interaction between the process of innovation and the choice of innovation strategy.

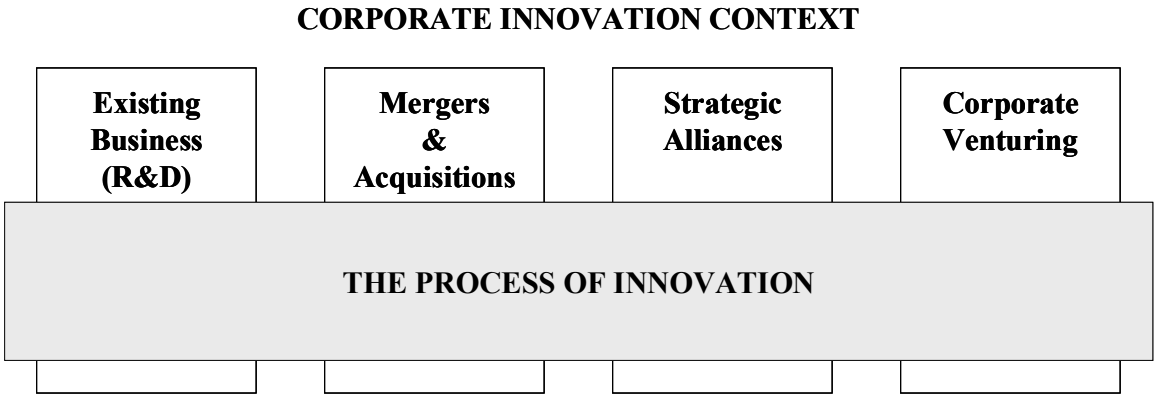

Figure 8 The process of innovation and the innovation strategies.

This chapter presented briefly some of the challenges related to mergers and strategic alliances. The following chapters move on by presenting the dimensions along which innovation can be assessed and by introducing a framework for assessing innovation which aims at helping companies to decide which strategy to pursue based on the different characteristics of innovation. That framework is an important part of this dissertation because it is used in the context of corporate venturing to assess ventures' potential to generate corporate renewal.

2.3.4 Defining dimensions for assessing innovation

The choice of innovation strategy is related to a company's business environment and its ability to take advantage of emerging opportunities. Essential in choosing an innovation strategy appears to be the definition of dimensions for assessing innovation. This study suggests that by framing the innovation challenge and developing common rules for assessing innovation at the corporate level, a company can improve the odds for generating corporate renewal and organize development accordingly.

Framing the innovation challenge is an essential part of a successful innovation strategy. It involves understanding the key parameters, the dynamics of the competitive game and the role which technological knowledge plays in it (Tidd et al., 2001). It is a critical task because it influences resource allocation and organizational behavior (Gilbert & Bower, 2002, Brown & Eisenhardt, 1998). Recognizing the need to simultaneously manage competing frames, opportunities and risks, and allocating resources accordingly is the key to an effective response (Gilbert & Bower, 2002).

Ideally companies could pursue different types of innovation in different contexts. Depending on the characteristics of an innovation a company may choose to pursue innovation in house (R&D related to existing business), to engage in corporate venturing, to make mergers and acquisitions, or to participate in a strategic alliance. Essential is to choose an optimal context for realizing the potential of a given innovation. According to the existing literature the choice of context can be based on the following criteria:

- Burgelman & Sayles (1986, p.183) suggest determining the administrative and operational linkages to the existing business and choosing an organizational design accordingly.
- Christensen (1997, p.203) suggests fitting innovation's requirements with the organization's capabilities which are seen to consist of responsible commercial structure, structure of the development team, fit with organizational processes and fit with an organization's values.

- O'Reilly & Tushman (2004) in turn conclude the superiority of "ambidextrous organization" which allows superior performance by separating new exploratory units from traditional exploitative ones while maintaining tight links across units in the senior executive level. They reconcile the paradoxical demands for the short term productivity objectives and the inconsistent long term objectives by building internally inconsistent architectures within a single organization (Benner & Tushman, 2003).
- Teece & Pisano (1994) consider that the three areas of integration essential for the success of an innovation strategy are the location of R&D and other technological activities, the role of R&D and related functions in determining the allocation of corporate financial resources and the links between innovation strategy and corporate strategy.
- Tidd & Bodley (2002) conclude that technological and market uncertainty together with technological complexity may provide a more comprehensive typology of technology and innovation management.
- Venkataraman et al. (1997) note that the most important variables to be taken into account when designing structures for entrepreneurial organizations are the level of uncertainty surrounding the new business development, the metering problem surrounding the effort and performance of key resource exchangers or principals and agents involved in the development of the business activity and the level of insulation (or vulnerability to leakage) surrounding the core technologies or capabilities.

This study has identified the determinants of strategy as industry, location, resources, knowledge, organizational structure and culture, market, technology and business model. Of these industry, location, resources, knowledge as well organizational structure and culture determine the corporate context which relates to the way a company chooses to compete: its choice of markets, technology and business model, which in this study are identified as the components with which innovation is analyzed. This study concludes that framing the innovation challenge by breaking innovation into its components helps

companies to analyze corporate context and its capability for innovation. Framing the innovation challenge by using the components of innovation is helpful, but however not sufficient for assessing the renewal potential and business potential of an innovation. In addition, it enhances the innovation assessment to include two dimensions: novelty and complexity.

Novelty: Several authors have used degree of novelty to characterize innovation (Christensen, 1997, Christensen & Overdorf, 2000, Christensen et al., 2003, Christensen & Raynor, 2003, Damanpour, 1991, Henderson & Clark, 1990, Norling & Statz, 1998, Tidd et al., 2001). Innovations can be divided into incremental and discontinuous according to degree of novelty. In this study novelty is a seen as a dimension measuring the difference to the existing business. The more a new venture, service or product differs from tradition, the more likely it is that the internal entrepreneurial efforts will fail (Kanter et al., 1987). Novelty relates to high risk which can be described as uncertainty and ambiguity that are the very characteristics of today's business environment (Garud & Van de Ven, 1992, McGrath et al., 1994). Uncertainty implies imperfect knowledge about the causality of means and ends and ambiguity implies imperfect knowledge of which ends are worth pursuing (Garud & Van de Ven, 1992). Uncertainty should however be distinguished from risk: it precludes the setting of objective probabilities (Jones & Butler, 1992). In other words uncertainty is a measure of the array of potential outcomes for a company or project (Gompers & Lerner, 2001). According to Minzberg (1979) innovative organizations need to take into account the human reactions to ambiguity and try to ensure efficiency despite it. Also when uncertainty is high, conventional project appraisal techniques are only of limited usefulness, leading to difficulties in managing resource allocation (Christensen, 1997, Tidd et al., 2001).

Innovations with a relatively low novelty can be a rich source of incremental and transforming innovations and provide significant growth opportunities (Day et al., 2001, Von Hippel, 1988). As much as 77% of innovations are incremental in nature (Von Hippel, 1988). *Incremental* (evolutionary, sustaining) innovation introduces relatively minor changes to the existing product and exploits the potential of the established design. Incremental innovation tends to reinforce the competitive positions of established firms,

since it builds on their core competencies or is "competence enhancing" (Henderson & Clark, 1990).

But higher degree of novelty is needed to sustain long term growth. *Discontinuous* (revolutionary, radical, disruptive, non-linear) innovation in contrast, is understood as the sudden appearance of a major breakthrough in technology that can yield entirely new products, processes and services. It is usually based on a different set of engineering and scientific principles and often opens up whole new markets and applications. Radical innovation challenges established firms since it destroys the usefulness of their existing capabilities (Henderson & Clark, 1990) and because they do not fit in their structures: radically new products have no obvious locations into which they can be transplanted (Burgelman & Sayles, 1986). When industry changes dramatically incumbents do not do well and the advantage shifts to newcomers (Christensen, 1997, Christensen & Bower, 1995, Hamel, 2000, Rice et al., 1998, Tushman & O'Reilly, 1997).

Complexity relates to the autonomy of innovation. Innovation at the integrated system level i.e. architectural innovation, usually takes place less frequently than at the component level and has a greater impact (Tidd et al., 1997, Christensen, 1992a, 1992b). Architectural innovation may render a firm's existing architectural knowledge useless but preserve the relevance of the component technologies (Tidd, 1997). Henderson & Clark (1990) found that established companies find architectural innovation difficult. According to them established companies actively engage in incremental innovation and manage it by embedding architectural knowledge in their communication channels, information filters and problem solving strategies. Architectural innovation requires change in all of these elements and is thus difficult to achieve. Component knowledge, in contrast, is more likely to be managed explicitly and is thus easier for established companies.

The complexity of innovation needs to be taken into account when organizing development. An autonomous or component innovation is easier to develop through cooperation agreements compared to systemic innovation or architectural innovation which require more information sharing and coordinated adjustment (Chesbrough &

Teece, 2002, Galunic & Eisenhardt, 2001). Different modes of technological innovation will demand different inter-organizational linkages. Under conditions of technological and market complexity, two organizational factors affect the ability of a firm to develop and commercialize new products and services: firstly the internal organization of the firm and secondly the links between different parts of the organization and links with other organizations (Tidd, 1997). Organizational complexity, environmental complexity and company resources need to match. As environmental demands evolve over time managers need to adopt a dynamic view about organizational capabilities (Ghoshal & Nohria, 1993). For effective collaboration, a company's organizational structure must be able to accommodate the real and evolving interdependencies among new and existing business units (Burgelman, 2001).

This chapter has introduced some of the existing theories about assessing innovation and come to the conclusion that in addition to the commonly used novelty, complexity is also an important dimension for analyzing innovation. The next chapter will use these two dimensions and develop a framework for analyzing innovation along its three components: market, technology and business model.

2.3.5 A framework for assessing innovation

Novelty, which relates to uncertainty, was concluded to be a key dimension of innovation. This study suggests that a company can assess the challenge of corporate renewal related to a given innovation by analyzing the novelty of each component of innovation (market, technology, business model). When assessing the challenge of corporate renewal it is important to realize that the novelty of each component is always relative to the corporate context of a company: industry, location, resources, knowledge and its organizational structure and culture. The following Figure 9 illustrates the way this study relates novelty of market, technology and business model which can be used to assess innovation and the challenge of corporate renewal related to it.

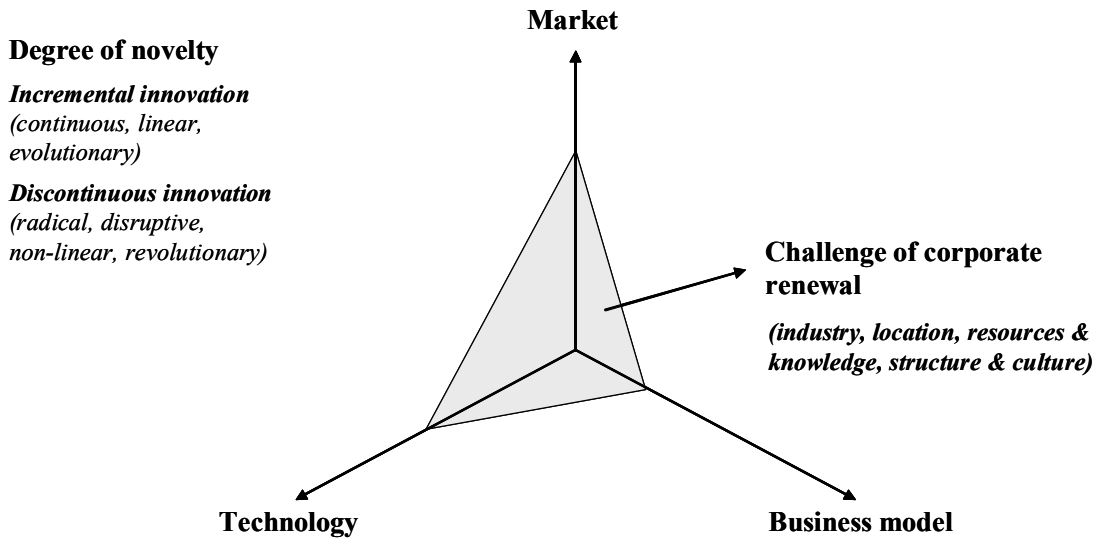

Figure 9 Linking the concepts of innovation and corporate renewal according to the degree of novelty of market, technology and business model helps to identify the changes needed in corporate context (industry, location, resources, resources & knowledge, structure & culture). In doing so it illustrates the challenge of corporate renewal (area).

The degree of novelty does not in itself allow a company to decide if an innovation is worth pursuing. The degree of complexity is also an essential component of defining the business potential of a given innovation. The Figure 10 illustrates how the degree of novelty and degree of complexity of market, technology and business model can be used to define the business potential of a given innovation and to decide if it is worth pursuing.

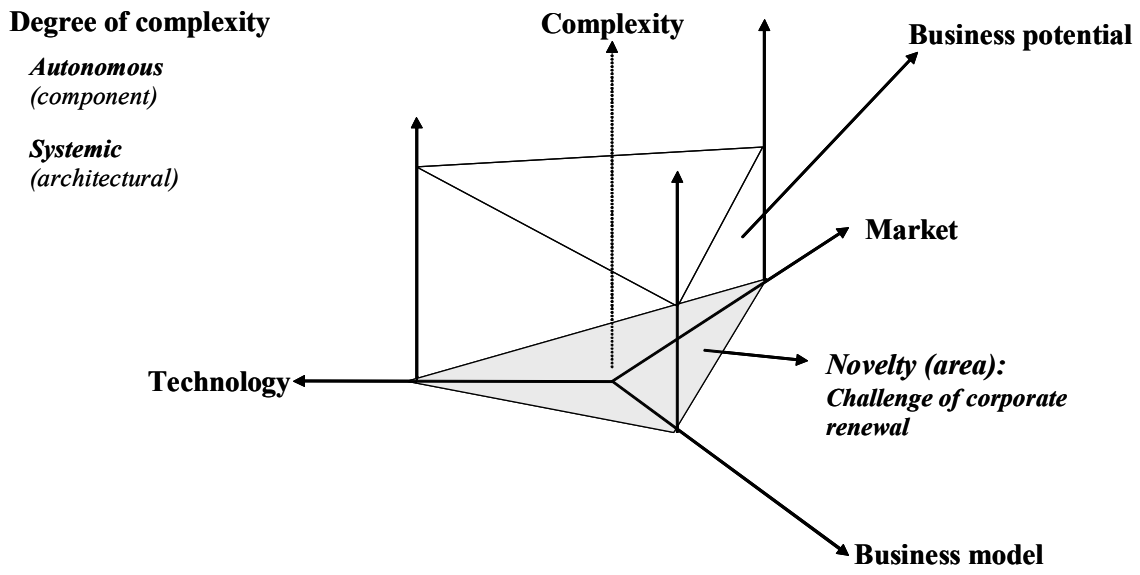

Figure 10 Linking the concepts of innovation and corporate renewal with the degree of novelty and complexity of market, technology and business model illustrates the business potential of a given innovation (volume). It helps to identify innovations that have both the potential to generate corporate renewal and still be viable business opportunities.

Complexity of markets as understood in this study reflects the extent to which a company understands underlying customer needs and the supply chain. Even in mature markets, a company's ability to understand the motives of customers may be a significant source of corporate renewal. Technological complexity is a rich source of competitive advantage. But it is also a great danger. Too much focus on technology and too little on market may lead to a situation in which a company is engaged in developing functionality that does not add value for users (negative complexity). In addition, business model complexity is an important dimension especially in joint development agreements because it underlies companies' ability to benefit from shared development.

The greater the degree of novelty (illustrated by area in the Figure 9), the further an opportunity is from the existing business, and the greater the challenge of and the opportunity for corporate renewal. This study suggests that innovations with low novelty can be best developed within the existing business. Innovations that involve high novelty and thus present a greater risk need more freedom to develop and can be separated from

the existing business. Assuming of course, that the related business potential is seen as sufficient.

2.3.6 Theories about innovation: conclusions

This chapter began by asking questions related to the role of innovation as a source of corporate renewal. Based on the theories of innovation reviewed in this chapter this study concludes that:

- A company needs to understand innovation at the corporate level to respond to change in today's turbulent marketplace, to engage in the pursuit of different types of innovation which in turn form the basis for both sustaining existing and building new competitive advantages, i.e. continuous corporate renewal. To build that understanding companies need to carry out simultaneous market, product and process development, to optimize the use of resources according to the type of innovation and to build the ability to execute development efficiently.
- The key challenges in managing innovation relate to managing the innovation context and realizing that innovation needs to be managed as a process. These challenges can be overcome by gradual improvements: focusing on each part of the innovation context and improving the process of innovation phase by phase.
- A company may choose to pursue innovation in the context of existing business or through corporate venturing. In addition it may choose to engage in mergers and acquisitions or strategic alliances. Each innovation strategy has the potential to generate corporate renewal. Thus a company needs to assess the characteristics of innovation and corporate context in order to choose the most suitable strategy.
- This study defines novelty and complexity as the key dimensions of an innovation to be considered when assessing the renewal potential of a given innovation.
- This study relates the renewal potential of an innovation to corporate context and identifies market, technology and business model as the characteristics of innovation that define a company's capabilities to generate corporate renewal related to a given innovation. Linking these characteristics to the key dimensions

(novelty and complexity) it drafts a framework for defining the renewal challenge related to a given innovation and for assessing its business potential. In doing so it helps companies to decide if an innovation is worth pursuing and to choose an innovation strategy that is best suited to develop it further.

This study highlights the importance of choosing an optimal context by the type and dimension of innovation. The following Figure 11 illustrates the interplay between the corporate innovation context and the process of innovation and highlights their importance of defining the renewal potential of a given innovation.

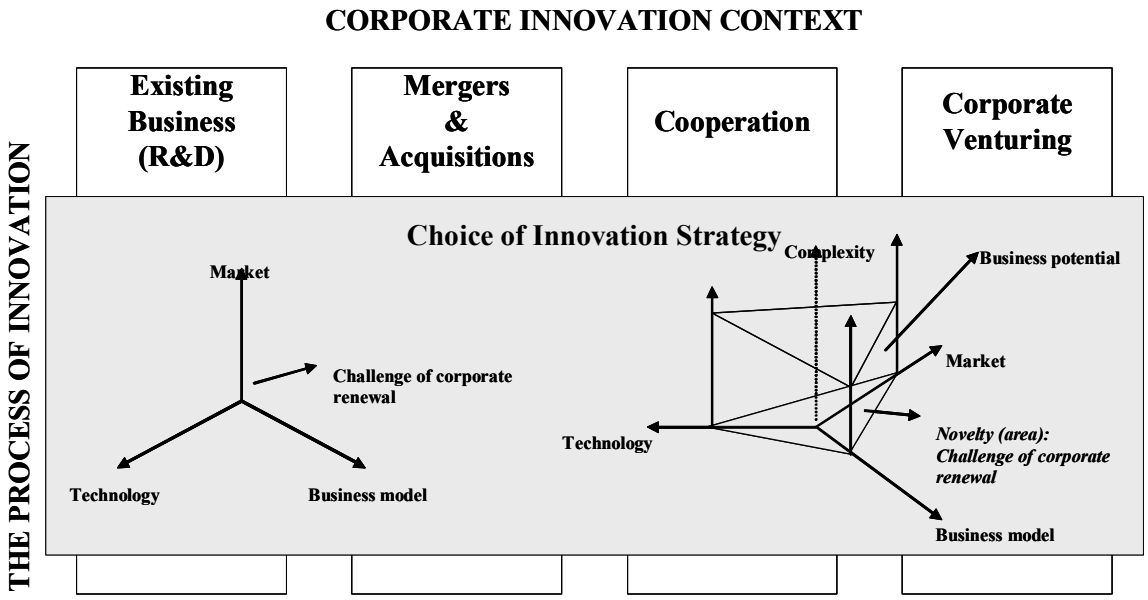

Figure 11 The interplay between the type and characteristics of innovation and the choice of innovation strategy in the corporate context.

The innovation assessment framework presented in this chapter is a key construct of this study and later used to define the renewal potential of corporate ventures – which by definition represent innovations that are further away from the existing business.

2.4 Theories of corporate venturing

2.4.1 Why do established companies venture?

Corporate venturing can be seen as a method for fostering entrepreneurship in large corporations (Kanter et al., 1990) and for complementing traditional R&D (Coveney et al., 2002). This chapter consists of a brief overview of the private venture capital process and a comparison of independent and private ventures to provide a basis for understanding the concept of corporate venturing. In addition it describes motives and perceived benefits of corporate venturing from the viewpoint of an established company.

Venture capital is an instrument which can be best defined as active investment in private companies with high growth potential (Markman et al., 2001). It is an important source of financing for technology based new firms (Gompers & Lerner, 2001, Maula, 2002), which may have limited access to capital because of uncertainty, information asymmetry, the nature of firm's assets and the conditions of relevant financial and product markets (Gompers & Lerner, 2002). Venture capital is also an important factor in a broader economical sense. It effects the economy as a whole by creating jobs, breeding innovation and speeding up regional development and by providing financing for companies that other investors perceive too uncertain and risky (Gompers & Lerner, 2001). The role of venture capitalists as intermediators between entrepreneurs and suppliers of capital is based on their perceived capability to use information asymmetry and complexity for their benefit (Amit et al., 2000, Markman et al., 2001).

This study's interest in the management of private venture capital is based on the established companies' opportunity to learn from the venture capital cycle which can be divided into phases of fundraising, investing capital and exiting from the investment (Gompers & Lerner, 2002) and the benefits that they provide. Venture capitalists enhance the growth prospects of their portfolio companies (Manigart & Sapienza, 2000). In addition to contributing capital, they help their portfolio companies by providing ongoing strategic advice and contacts with potential customers and by facilitating the formation of strategic partnerships (Gompers & Lerner, 2001). Venture capitalists typically play an

important role on the board of directors of the companies in which they invest (Markman et al., 2001). The benefits from establish companies' point of view include their ability to draw strategic value from new enterprises that expand the parent company's horizons and their ability to send strategic value to the new enterprises to make them successful (Mason & Rohner, 2002). Potential limitations in achieving these benefits involve weaker incentive intensity, financial discipline and monitoring as well as potential constraints in discovering alternative business models (Chesbrough, 2000). Gompers (2002) suggests a link between investments in corporate venturing and independent venture capital industry and concludes that corporate investments have been at least as successful as independent investments. To insulate the corporate venturing program from corporate pressures some firms have essentially outsourced investment picking, relying on venture capitalists who make return on investment the top priority (Brull, 2001).

Comparison of independent and corporate ventures: In contrast to independent ventures, corporate ventures have two major operating environments: the corporate context and the market environment (Backholm, 1999). Corporate ventures may benefit from the physical and intellectual capital of the parent company. A corporation that is venturing has a network of business contacts and partners, a profound knowledge of what is needed in its own industry space and solid understanding of the competitive landscape (Mason & Rohner, 2002). However, Shrader & Simon (1997) conclude that in spite of significant strategy and resource differences between independent and corporate ventures, they did not differ in performance. Chesbrough (2002) states that linkages between resources and capabilities may facilitate transfer of knowledge. In addition, external venturing may also offer the investing company an opportunity to abandon capabilities that have become liabilities and to build new ones.

Corporate venturing activities may involve different organizational forms: they may be a part of the parent organization (internal ventures) or take the form of internal corporate joint venture which as defined by Zajac et al. (1991) involve the creation of an internally staffed venture unit which is semi-autonomous, with the sponsoring organization maintaining ultimate authority, but legally distinct from the sponsor. The rationale behind internal joint ventures is to engage a group of partners in a joint effort to provide

innovative products and services not easily provided by traditional organizational arrangements. Fast venturing (Kambil et al., 2000) resembles internal joint venturing. However, its focus is on developing web enabled business through co-operative arrangements. Launching a corporate venture is not easy. It typically encounters resistance on the part of the existing business. Block & MacMillan (1993) name lack of legitimacy as the main reason for resistance and inertia, and conclude that it may lead to resource starvation which limits corporate venture development.

Understanding private venturing as well as the key differences between private and corporate ventures as well as the organizational alternatives for them provides a basis for understanding the motives for corporate venturing as well as the perceived benefits provided by it.

Recent literature divides **motives for corporate venturing** into two main categories: financial and strategic. It seems that while companies usually set economic targets for their venturing activities, the motives to start venturing are rarely only in financial nature. Dickman et al. (2002) found that some 30% of companies were venturing mainly for financial gains, but nearly twice the number, were venturing for strategic reasons. But even if the primary motive of venturing is strategic, its strategic value needs to exceed the costs involved. This study focuses more on *the strategic motives* to venture which include nourishing innovativeness and sustaining diversification and growth by creating new business (Backholm, 1999, Burgelman, 1988, Campbell et al., 2003, Dickman et al., 2002, Chesbrough, 2002, Chesbrough & Socolof, 2000, Sykes, 1993, Tidd & Taurins, 1999). In addition companies venture to achieve strategic renewal, to develop new competencies and technologies, to promote diversity and innovative corporate culture and to learn through exploration (Backholm, 1999). The strategic motives can be further divided into learning about new opportunities, leveraging existing capabilities and stimulating innovation.

Learning about new opportunities has been noted by several authors (Chesbrough, 2002, Keil, 2002, Tidd & Taurins, 1999) and involves activities that focus on developing new products, services and capabilities. Learning oriented activities include learning about the venturing process, developing new competencies and developing new managers (Tidd &

Taurins, 1999) as well as being at the forefront of the new technology (Rubery, 2002). Learning relates to the desire to enter new emerging areas, launching and testing new markets, products and services in areas where a company cannot apply the typical procedures for introducing products (Coveney et al.,2002, MacMillan & George, 1985, Rubery, 2002, Simon & Houghton, 1999). *Leveraging existing capabilities* is about exploiting existing assets to generate new revenue streams (Chesbrough, 2002, Dougherty, 1995, Keil, 2002, Rubery, 2002, Tidd & Taurins, 1999). Existing assets involved in the venturing process include a company's intellectual property, technologies, brands and physical assets (Dickman et al., 2002). Corporate venturing can be used as a way of unlocking the hidden potential of technologies which lie inside private central research labs and do not fit with established businesses. As such the role of corporate venturing is in developing new mechanisms for leveraging a corporation's unparallel technology bases across multiple new business opportunities and increasing the rate at which it commercializes its technologies (Chesbrough & Socolof, 2000). Leveraging activities include exploiting under-utilized resources, extracting value from existing resources, introducing competitive pressure onto internal suppliers, spreading the risk and cost of product development and divesting non-core activities (Tidd & Taurins, 1999). Ventures may aim at tapping a corporation's intellectual properties to create spin-off ventures in non-core markets, often in alliance with outside partners (Coveney et al., 2002). Yet another strategic motive to venture is *stimulating innovation* and demonstrating the mainstream organization how to innovate (Kanter et al., 1990, Mason & Rohner, 2002). Corporate venturing is seen as a way to engender an entrepreneurial spirit, attract and retain new people and to increase speed and flexibility (Rubery, 2002). Also Christensen (2003) notes the need for multiple business units as the strategy and business model needed to satisfy existing customers is very different from new business creation which is seen to require more flexibility. In addition venturing has potential to provide fringe benefits through innovation and end up having a major impact on existing business (Simon & Houghton, 1999).

Benefits of corporate venturing: Taken the strategic nature of corporate venturing, the question arises of whether companies are harvesting the desired benefits from their venturing activities. According to Merrifield (1993) statistically venture capitalists often

realize only about two or three commercial successes out of every 10 they fund. Block (1982) shares this view and concludes that a fair assumption in developing a venturing program is a 10-20 % success rate, where success is defined as venture survival with a significant return on investment. He notes that perhaps one in ten may be a big winner. It appears, therefore, that the percentage of success is less important than the magnitude of failures (Block, 1982). However, some studies indicate that corporate venturing is a potentially more efficient means to sustain innovation than traditional corporate R&D (Mason & Rohner, 2002). For example Coveney et al. (2002) conclude that many new ventures are already meeting their potential for promoting growth and thus meeting the challenge of creating new markets or testing and launching innovative products and services.

The potential benefits of *internal corporate venturing* include development of new technology and product adjacent to the core business in the short term and development of new and emerging technologies in the medium and long term (Rubery, 2002), development of business entirely new to the company, business that extends the offerings of a core division, or start-ups, spin-offs and joint ventures based on the company's technologies and capabilities (Coveney et al., 2002). In addition venturing may benefit a company by acting as catalysts for the development of business-building capabilities within a wider organizational scope (Coveney et al., 2002). As far as benefits of *external corporate venturing* are concerned it is important to understand that it must offer structural advantages over private venture capital to justify its existence (Chesbrough, 2000). The benefits of external corporate venturing include exploitation of new business opportunities by creating options to enter at a later stage, by providing access to complementary capabilities, by gaining control over critical assets or players, and by supporting the enactment of markets (Keil, 2002). In addition external corporate venturing can grow a company's existing business by promoting a standard, stimulating demand and leveraging underutilized technologies. It has potential for growing future business by experimenting with new capabilities, developing a back-up technology and exploring strategic white space (Chesbrough, 2002). A company's ability to benefit from its external venturing activities relates to its ability to fund and sustain longer term projects and invest the large sums required to drive the development of complex systems,

the corporate ownership of important physical, knowledge-based and other intangible complementary assets, and the potential to retain more learning from failures, as they do not punish failure as fully as private venture firms do (Chesbrough, 2000).

The perceived benefits of internal and external venturing seem to differ – and thus lead to the need to observe the context and the management processes related to them which are the core themes of the next two chapters.

2.4.2 Building a venturing context

Taken the underlying motives and desired benefits of venturing it appears that ventures need to be managed differently than more mature businesses (Block, 1982, Block & MacMillan, 1993, Coveney at al., 2002, Kanter, 1985, Sykes & Block, 1989). Thus, from an established company's point of view it seems essential to take into account the needs of new and mature businesses and an ability to invent and tolerate a mix of apparently contradictory policies and practices (Sykes & Block, 1989). This study identified corporate venturing as an innovation strategy. Building on this approach, this chapter seeks first to establish an understanding of venturing as a strategic activity. Second, it describes the issues related to strategic management of venturing and third to the key issues related to structuring. Finally, it looks at the criteria for evaluation and compensation which appear to be quite different from the mainstream business.

The need for **establishing a corporate venturing strategy** is recognizing venturing as a strategic function (Chesbrough, 2002, Burgelman, 1984) and that it takes long term commitment to achieve substantial results (Simon & Houghton, 1999, Burgelman, 1988). A venturing strategy should be specific and draft the guidelines for deciding the number and size of ventures the company is willing and able to support and should define markets which the company desires to enter or technologies the company seeks to explore through venturing (Block & MacMillan, 1993, McGrath & MacMillan, 2000, Miller & Camp, 1985, Rubery, 2002, Simon & Houghton, 1999). The need for venturing strategy seems logical and yet in company after company, attempts at new venture development have failed abysmally because management cut back on critical resources when the organization fell on hard times (MacMillan & George, 1985). Ironically, even

when senior executives start the ventures because they predict declines in their core business, they may decide to end the venturing program if their predictions come true (Simon & Houghton, 1999). The reason for not gaining from venturing investment is too hasty retreat. Nearly one-third of the companies investing corporate funds in start-ups in September 2000 had stopped making such investments 12 months later. In addition, during the same period the amount of corporate money invested in start-ups fell by 80%. These swings provide evidence that big companies have neither the stomach nor the agility to manage investments in high risk environments (Chesbrough, 2002).

Not having a clear venturing strategy appears to be an important source of failure. For example, Chesbrough & Socolof (2000) conclude that some of the problems that firms encounter are structural and some relate to how the programs are managed. In a similar vein, MacMillan et al. (1986) name inadequate planning and inadequate support as the key obstacles for venture success. Also Shrader & Simon (1997) found that pursuing broad strategies decreased the performance of corporate ventures. This implies that strategic focus related to corporate venturing activities is an important determinant of success. This view is also supported by Sykes (1993), who found that a lack of strategic fit in terms of size or market fit caused corporations to discontinue financially viable ventures. These findings indicate that corporate venturing activities should be closely connected to the corporate strategy. The challenge, however, is to make sure that the company's strategic goals don't make it impossible for the corporate venture team to operate (Brull, 2001).

Strategy also sets the guidelines for defining the size and scope of venturing activities which should find a match between venturing activity and the evolving organizational capacity for venturing (MacMillan & George, 1985). Experience in venturing may indicate improvement in the venturing performance, but only after several attempts (MacMillan et al., 1986). Another factor to be considered is the similarity between the venture and the existing business, defined as the potential to create synergies and share resources. Simon & Houghton (1999) suggest that the greater the similarity, the greater the number and size of the ventures can be. While scope is important for guiding venturing activities, organizations should avoid being overly narrow or unrealistically

optimistic. According to Block & MacMillan (1993) excessive caution could result in the rejection of a technology, innovation or a potential market.

Strategic management of corporate venturing build on the venturing strategy and involves defining the role venturing has in the innovation context of a company. This includes framing the venturing challenge (Burgelman, 1988, Christensen, 2003, McGrath & MacMillan, 2000, Rubery, 2000), designing a mission statement articulating the primary motives for venturing (Richards, 2002) and dedicating management time for making informed decisions at each stage of the venturing process (MacMillan et al. 1986). Establishing a frame helps people to realize what is expected of them and to create a sense of urgency about becoming more entrepreneurial (McGrath & MacMillan, 2000). The way an innovation is framed inherently influences its odds to succeed. Clark (2002) recommends framing disruptive innovations as a threat within the resource allocation process but shifting the frame to an opportunity once the commitment has been made.

Strategic management of corporate venturing links to corporate level. It is essential because many of the real obstacles to developing businesses within corporations occur at the corporate level (MacMillan & George, 1985). These obstacles include failure to recognize the strategic nature of venturing reflected by lack of commitment and support from the part of top management (MacMillan et al., 1986) and the need to manage emerging and established business differently (Block, 1982, Kanter, 1985). In addition, top management time is limited: they may be faced with information overload related to existing customers, markets and employees (Day et al., 2001) or they may be too distant from the marketplace (Hamel, 2000). Top management has an important role in making sure that the strategic nature of venturing activities are understood throughout the organization. Their role is to balance the provision of adequate support to the venture and to isolate it from potentially harmful organizational resistance as well as to resolve the degree of separation between the corporate venturing activities and the mainstream business (Block & MacMillan, 1993, Day et al., 2001, Mason & Rohner, 2002, Simon & Houghton, 1999). Senior management needs to have the determination to pay sustained attention to managing the venturing process while avoiding getting embroiled in the details of individual ventures (MacMillan & George, 1985). Strategic management of

corporate venturing and generating corporate renewal through venturing activities requires building a corporate culture promoting knowledge sharing (Burgelman, 1988, Grove & Burgelman, 1996, Garud & Van de Ven, 1992), adjusting and manipulating key variables related to ventures: venture format, management choice and compensation, business plan approval, organizational positioning and financing milestones (Block, 1982) and adjusting the course of action according to early results (Garud & Van de Ven, 1992).

Venturing corporations should target the creation of an environment favorable for innovation, one that encourages generation of new ideas and identification of new opportunities (Block & MacMillan, 1993, Mason & Rohner, 2002). Corporate managers should be encouraged to be innovative and discouraged from standing in the way of creativity (Calish, 1984). That leads inherently to **structuring challenge** which will be explored in the following.

In relation to venturing, and many other issues for that matter, there is not one structure that fits all. While some firms are clearly focused on external corporate venturing and develop a rich spectrum of organizational arrangements, others focus on internal venturing and only use inter-firm relationships to support internal business creation (Keil, 2002). As identified by Roberts & Berry (1985) the spectrum of alternative approaches includes internal development, internal start-ups, licensing, various forms of joint ventures acquisitions and "educational" participation in venture capital. The most effective organization and management of a new venture will depend on the strategic importance of the venture for corporate development, and on its proximity to the core technology and business (Block & MacMillan, 1993, Burgelman, 1984). The choice of the most suitable format is about matching the venture needs with the company characteristics (Block, 1982) and choosing the level of connectedness accordingly (Zajac et al., 1991). There are a number of studies about structuring venturing. Block & MacMillan (1993) propose organizing corporate ventures for maximizing learning, maximizing the capture of know-how, minimizing or managing intrusions and using the simplest possible coordination mechanisms to meet the venture's linkage needs. Tidd & Taurins (1999) suggest that the most appropriate organizational structures and

management processes depend on a number of factors including whether the primary purpose is to leverage existing competencies or to develop new ones. They identify four alternative structures for ventures: direct interaction with existing business, a dedicated staff function to support efforts company-wide, a separate corporate venturing unit or department and an independent business unit or spin-off. Campbell et al. (2003) divide venturing in four categories: ecosystem venturing, innovation venturing, harvest venturing and private equity venturing and highlight that the biggest difference between companies that succeed and companies that fail is their ability recognize and utilize the differences in venturing forms.

Separate venturing divisions are to be used for products that are both new and different. Different means that the product or process does not fit well with the existing business, new implies the need for a different managerial mode (Kanter et al., 1990). Venturing, by definition, is creating new business that may not have any corporate fit beyond its impact on overall corporate profitability and growth (Calish, 1984). Several authors (Block & MacMillan, 1993, Calish, 1984, Coveney et al., 2002, Day et al., 2002) suggest separating venturing divisions from existing business. However, there are different opinions about the degree of separation. Day et al. (2001) suggest balancing separation and integration. They conclude that although ventures do need space to develop, strict separation can prevent them from obtaining invaluable resources and rob their parents of the vitality they can generate. Kanter et al. (1990) found that venture units with higher autonomy performed better than ones highly controlled by corporate management. MacMillan & George (1985) divide ventures into six categories based on their difficulty and time horizon, as illustrated at Table 6. They propose that most companies wanting to use venturing as a vehicle for substantial growth have established separate entities through which they create and develop level 4, 5 and 6 ventures. The problem to solve in positioning is how to fulfill the venture needs while protecting it from the negative characteristics of the company which may hamper it (competition, decision delays etc.).

Venture level	Nature	Time horizon
Level 1	Enhancements of current products and services for current markets	Within 2 years
Level 2	New products and services for current markets	Within 2 years
Level 3	Existing products and services for new markets	Within 2 years
Level 4	New products and services for current markets or existing products or services for new markets	Longer than 2 years
Level 5	New products and services that are unfamiliar to the company, but being sold by other companies	Longer than 2 years
Level 6	New products and services that do not exist today – developed to replace current products or services in known markets or entirely new markets to be created	Very long time horizon

Table 6 Six types of corporate ventures in the order of increasing difficulty (MacMillan & George, 1985).

This study emphasizes that structuring of the venturing unit should be dynamic and reflect changes taking place in the environment and in the venture development. It agrees with Block's (1982) view according to which the position of a venture should be reconsidered whent it has become sufficiently established to either stand on its own as a new entity or be combined with an existing operation.

While the previous chapters have built an understanding of the need for a venturing strategy as well as different issues related to the management and structuring of venturing what is left to be considered is the basis for **setting criteria for evaluation and compensation** – which in the case of venturing need to differ from those of the existing business. Where established business is concerned, performance is typically evaluated against set criteria and compensation is defined by how well the targets are met. Target setting for venturing should be different, as it must accommodate the uncertainty and ambiguity involved. Setting goals creates pressure for action, establishes linkage with strategic objectives and can serve as a basis for evaluating performance (Block & MacMillan, 1993). To use early outcomes to learn and to redirect further development companies should document and test assumptions by setting milestones against which the performance is measured (McGrath & MacMillan, 2000). At every phase it is necessary to notice what has been learned in the achievement of specific milestones to assess if changes are needed in the plan and to use milestones as triggers for funding the next step

(Sykes & Block, 1989). It appears that the evaluation criteria for ventures are should meet the need to create a successful business while at the same time protecting the parent organization against excessive losses and maximizing learning (Block & MacMillan, 1993). The dual role of corporate ventures in terms of market and parent firms suggests that the performance of ventures should be assessed in both contexts (Backholm, 1999). He summarizes the criteria for assessing venture performance into categories of first and second order performance. The measures of first order performance include survival, growth and relative profitability. The second order performance is more difficult to conceptualize and includes factors like organizational learning and innovativeness. Sykes (1992) identifies equity and equality as the cornerstones for compensating corporate venture personnel. Equity refers to paying by performance, equality to distributing rewards equally. Venture assignments often carry more career risk than a job in the base business, and usually require more individual effort and sacrifice of personal time to succeed (Sykes & Block, 1989). A venture incentive compensation plan should match reward against achievement as well as personal risk. The plan should be constructed so that there is congruence between the individual, venture and corporate goals and it should be flexible enough to adapt to changes in corporate strategy. It should emphasize both team and individual awards and above all be perceived as fair by those outside as well as those in the plan (Sykes, 1992).

This chapter provided a basis for understanding the issues related to building a venturing context: the need for venturing strategy as well as strategic management of venturing as well as the principles for structuring and setting criteria for evaluation and compensation. The next chapter focuses on the different management processes needed to make venturing succeed: that is the particular challenges related to managing the venturing portfolio as well as the internal and external ventures.

2.4.3 Managing corporate venturing

In search of corporate renewal it is essential that the ventures have freedom to explore new opportunities – and yet to be linked to the existing business. This chapter describes challenges of strategic management of corporate venturing, a key issue in which seems to

be balancing control and support. It appears that the key for materializing the benefits of corporate venturing is understanding that too much autonomy and freedom may contribute to venture failure (Block & MacMillan, 1993, Simon & Houghton, 1999) and hinder learning from venturing activities (Day et al., 2001, Rubery, 2002). This study approaches the strategic management challenge by dividing it into three components: differentiating between portfolio management and venture management to better control of risk through maintaining overall direction of venturing activities and developing processes for managing internal corporate venturing.

Portfolio management is the first element of strategic management of venturing. Portfolio management is about building portfolios of related ventures by taking a focused, disciplined approach to business building. It involves actively looking for ideas in targeted areas, commanding the business development skills needed to recognize likely opportunities and seeking feedback from experts inside and outside the company (Coveney et al., 2002). Essentially, it is about establishing basis for funding ventures and ensuring that the essential management roles are filled. A part of portfolio management is to build flexibility in initiating and *funding* ventures. According to Block (1982) this can be achieved by connecting venture funding to achieving specific milestones rather than to the annual budgeting process. In a similar vein, McGrath & MacMillan (2000) suggest managing the portfolio of ventures by assessing the related technical uncertainty and market uncertainty, as a method for managing risk and resource allocation.

Building a portfolio of ventures involves several *management roles*. An ombudsperson has a central position in balancing autonomy and control of the venturing program (Block & MacMillan, 1993, MacMillan & George, 1985, Simon & Houghton, 1999). An ombudsperson is a senior executive with recognized authority in the organization and preferably a position that outranks the venture godparent (Block & MacMillan, 1993). The ombudsperson's responsibilities include developing the venturing program i.e. overseeing the company's portfolio of ventures (MacMillan & George, 1985) and acting as an intermediator between corporate management and venture management (Simon & Houghton, 1999). Both internal and external portfolio managers are needed to build a balanced portfolio. Insiders have credibility, understand the organization and can marshal

resources to support the best new opportunities. External portfolio managers, hired from investment banks, consulting firms and start-ups, supply new skills and experiences, external perspectives and access to unfamiliar networks (Coveney et al., 2002). In addition, Mason & Rohner (2002) suggest a board of advisors similar to the venturing community, for providing oversight and advice for the ventures.

Managing internal ventures, that is, ventures that are legally part of an established company relate to managing the risk which is typically higher than in the mainstream business. The views of managing internal corporate venturing emphasize managing the process, positioning venturing in the corporate context and the role of management in during venturing process. The *process* view sees internal corporate venturing can be described as an advantage chain during which a company develops distinctive competitive advantages (McGrath et al., 1994). Kanter (1985) suggests considering knowledge intensity, competition with alternative courses of action and boundary crossing as the key management requirements of internal corporate venturing process and suggests mutual adjustment is the key management system. Also Burgelman (1983a, 1983b, 1984, 1988) sees internal corporate venturing as a process involving mutual adjustment. Figure 12 presents his process model in which control over the internal corporate venture process is extended through the structural context, which includes diverse organizational and administrative elements resulting in an internal selection environment in which the autonomous strategic initiatives emerging from below compete for survival.

Key activities	Core processes		Overlaying processes	
	Definition	Impetus	Strategic context	Structural context
Levels: Corporate management	Monitoring	Authorizing	Rationalizing	Structuring
Levels: New venture division management	Coaching Stewardship	Strategic building	Organizational - Selecting championing Delineating	Negotiating
Levels: Group leader/ Venture manager	Technical and need linking	Product championing Strategic forcing	Gate keeping Idea generating Bootlegging	Questioning

Figure 12. The process model of internal corporate venturing (Burgelman, 1983a)

While autonomy is necessary for giving the ventures a chance to develop, periodical evaluation is necessary to ensure that the course of action is still valid from the corporate point of view – that is *positioning ventures in the corporate context*. Although each venture can begin with clear objectives experience shows that they must be modified to fit reality (Block & MacMillan, 1993). They suggest that venture managers should undercommit and overperform, i.e. keep the involved risk in mind and try to minimize it throughout the internal venturing process. Venture management needs to focus on building momentum and gaining support for the new business (Burgelman, 1983a, 1983b, 1984), and simultaneously make sure that the new business is not viewed as a threat by the established business in the parent firm (Chesbrough, 2000). Given the small size of the venture relative to the parent and its dependence on the firm resources, venture plans have to be "politically correct" (Block & MacMillan, 1993).

Role of management has been found equally important. That involves the choice and motivation of venture management and venture personnel (Block, 1982, Block & MacMillan, 1993, Zajac et al., 1991). It takes a different kind of manager to start a business than to run an old one (Block, 1982). Developing a new venture requires top talent, not mediocre performers (MacMillan & George, 1985). David (1994) indicated greater success for ventures where the venture manager was the person behind the

venture idea. A venture manager should be committed to the venture, have proven knowledge of the business and demonstrated ability to attract, motivate and manage a high quality team of operational personnel (Calish, 1984) with focus on short term commercialization through strategic forcing (Burgelman, 1983). Venture managers are responsible for selecting strategies for ventures, defining how aggressively they pursue them and molding a venture's culture (Simon & Houghton, 1999). A venture needs a godparent to make sure that the parent company provides long term venture support, freedom from interference from the venture's daily activities and adequate incentives (Simon & Houghton, 1999). A corporate champion or a venture godparent is a high level executive who can be an advocate for the venture manager by blocking unwarranted corporate resistance (Block & MacMillan, 1993, Calish, 1984, Dickman at al., 2002, Simon & Houghton, 1999). The more important the venturing effort to the corporation, the higher all the roles should be on the organizational chart (Simon & Houghton, 1999).

External corporate venturing as it is seen in this study encompasses several organizational modes: alliances, acquisitions and spin-offs. The key issues in managing external corporate venturing are defining the primary motives for each venture and selecting an appropriate structure for gaining the desired benefits. The external venturing process should include phases similar to private venture capital: making the investment decision and committing capital in stages based on the monitored performance of the venture and governance through active board participation (Chesbrough & Socolof, 2000, Markman et al., 2001). Active participation in the ventures is a requisite for the processes of exploration and exploitation to take place (Keil, 2002).

Chesbrough (2002) views external corporate venture capital investment in terms of the objective (strategic or financial) and the degree to which the operations of the investing company are linked. Driving investments are tightly related to corporate strategy and have strong linkages to a company's capabilities. Enabling investments are strategically linked, but have looser linkages to capabilities. Emergent investments have tight links to capabilities in terms of sharing technology, production facilities or sales channels or in the form of product use, but offer little to enhance current corporate strategy. Passive investments are not connected to the corporate strategy and are only loosely linked to

capabilities. The framework helps to articulate the potential benefits for each investment type: driving investments help to sustaining corporate strategy, while enabling investments are only justified if they can capture a substantial portion of the market growth they stimulate. The ultimate return from emergent investments may result from exercising the strategic option. Chesbrough (2002) recommends focusing on enabling and emergent investments and avoiding passive investments, as they have little or no value for the company.

Keil's (2002) model of external venturing involves the processes of exploration and exploitation. Exploration refers to experimentation with fundamentally new alternatives and exploitation to the refinement of existing knowledge and competencies. The underlying motive for exploration is using corporate venture capital and in some cases direct minority investment to monitor markets and technologies. The information gained in the course of the exploration process is independent in nature, and thus provides a vehicle to feed additional information into the strategic processes. Exploitation of existing capabilities refers to creating options for rapid entry into markets or technologies, accessing complementary capabilities, gaining control over critical assets or players in the new or transforming market, or enactment of markets and technologies so that the firm can leverage its existing resources.

This chapter has dealt with the specific challenges related to the strategic management of corporate venturing – that is managing the venturing portfolio as well as internal and external ventures. However, benefiting from venturing as a source of corporate renewal does require more than just establishing the strategy and context for venturing – it does require linking venturing and mainstream business. The following chapter proceeds to describe the linking processes needed to make venturing an engine of corporate renewal.

2.4.4 Achieving corporate renewal through corporate venturing

This study aims at describing the role of corporate venturing in sustaining corporate renewal. By proceeding through the layers of corporate context (strategy, innovation and venturing) it has described the essence of corporate renewal, the conditions that favor it and the management processes that are needed. Yet the deep-down mechanisms of

corporate renewal remain to be described in this chapter – the processes of learning, leveraging and nesting that are needed to harness the renewal potential related to corporate venturing.

Ventures can be seen as a starting point for organizational knowledge creation (Nonaka & Takeuchi, 1995, p.73) and corporate renewal as the result of it. Generating corporate renewal through corporate venturing demands a systematic approach to knowledge management which Marquardt (2002, p.143) describes as a six stage process including acquisition, creation, storage, analysis and data mining, transfer and dissemination and application and validation. In addition to a systematic approach to knowledge management achieving corporate renewal through corporate venturing requires an open heart, open mind and open will, and the ability to proceed through the 7 stages of the U-model described by Scharmer (2004).

The importance of learning about new opportunities and leveraging existing capabilities needs to be balanced (Sinkula, 1994, Tidd & Taurins, 1999) This study views learning and leveraging as two processes that complement each other. To contribute to corporate renewal they need to be bi-directional and take place simultaneously in the context of existing and emerging businesses (venturing). The focus on these two processes needs to be balanced as an overemphasis of either one will lead to less than optimal results. The importance of nesting relates to the need to manage timing and resource allocation by prioritizing identified opportunities.

Learning in relation to corporate venturing can be described as strategic learning, an attempt to guide the future activities of an organization. This study approaches learning as a process and notes different types of learning and finally relates it to corporate venturing. Learning as a *process* can be seen to include phases of knowledge discovery, knowledge diffusion and informed action (Honig, 2001) or as a process by which organizations as collectives learn through interaction with their environment, proceeding through phases of knowledge acquisition, information distribution and interpretation and organizational memory (Sinkula, 1994). Furthermore, learning is a cyclical process:

individuals learn within the context of organizations and that context affects their learning which in turn may affect the performance of the organization (Tidd, 1997).

Types of learning involve learning-before-doing that according to Keil (2000) refers to learning processes that take place outside the external corporate venturing relationships before the actual venturing takes place. Other type of learning, learning by doing (Keil, 2002) or trial-and-error learning (Garud & Van de Ven, 1992) is a process during which a corporation learns new capabilities specific to the venture and at the same time builds external venturing capabilities. It involves initiating a course of action and continuing with it only if the outcomes associated with it are positive. Van de Ven et al. (2000b) concluded that while errors and mistakes, by definition, are the major sources of learning by trial-and-error they need to be corrected when detected because they can "snowball" over time into vicious cycles of even larger and more intractable complexes of problems. Tidd (1997) approaches types of learning by motivation. He divides learning into learning "how" and learning "why". Learning "how" involves improving or transferring existing skills whereas learning "why" aims at understanding the underlying logic or causal factors with a view to applying the knowledge in new contexts.

Relating learning and corporate venturing to corporate renewal is about establishing an environment favorable for learning in a corporate wide context. Organizations vary dramatically in the rate at which they learn (Argote, 1999). Thus it appears that creating a venturing organization which favors learning can improve a company's odds for generating corporate renewal. Burgelman (1988) notes the role of corporate venturing as a social learning process in which managerial action and cognition are intrinsically intertwined. The learning model builds on Burgelman's earlier studies of internal corporate venturing (Burgelman, 1983a, 1983b, 1984). In his model the interplay of action and cognition start from opportunistic search in the stream of ongoing work at the operational level to form a new concept of business opportunity. In this process, action and cognition evolve in an interactive fashion, as the concept evolves through operational, middle and top management. But learning alone does not guarantee strong performance in innovation. Bunderson & Sutcliffe (2003) conclude that too great an emphasis on learning can actually hurt performance. According to them,

overemphasizing learning and experimentation may distract teams from their goals and induce them to abandon adequate solutions in favor of untried approaches.

To maximize the opportunities to apply new knowledge companies need to seek possibilities to apply existing resources and capabilities in the context of new business and to apply new knowledge generated through exploration of new opportunities in the context of existing business. That leads to finding opportunities to leverage learning.

Leveraging is about exploitation, making the most of the resources and capabilities a company already has through knowledge transfer over a multitude of arenas. According to Honig (2001) leveraging or exploitation involves both knowledge diffusion and informed action. It can be defined by terms like refinement, choice, production, efficiency, selection, implementation and execution (Sinkula, 1994). *Knowledge transfer* is an essential element of leveraging. It requires a fundamental change in the assumptions that have shaped the way people in an organization have looked at things, and a creation of new communication channels that actually get people to experience the implications of an innovation (Brown, 2002). Knowledge transfer from ventures involves in-depth learning about market structures and dynamics, new technologies and business models and about the management of new business in general (Keil, 2002). Risk reduces as knowledge grows, and as knowledge grows so does the company's capability to advance (Hamel & Prahalad, 1993).

In practice, companies often do not know what they know (Tidd, 1997). Thus they need to engage in learning about the potential for leverage, identifying where and when specific knowledge and resources can be applied. Leveraging what a company already has, rather than simply allocating it is a more creative approach to scarcity. Hamel & Prahalad (1993, 1996) identify five arenas of leverage: concentrating, accumulating, complementing, conserving and recovering resources. According to them, concentrating is about having a clear strategic focus. Accumulating involves extracting knowledge and borrowing the necessary skills. Complementing requires the blending and balancing of different types of resources, and creating synergy among them through technological and functional integration and new product imagination. Conserving involves recycling, co-

opting and shielding, aiming at maximal leverage of resources. Finally, recovering is about expediting success, which enables minimizing the time between expenditure and recovery. In addition to resources, the success of venturing activities requires changes to existing resource configurations and routines. Venturing is a mechanism through which a firm gains superior insight about, and access to, firm-specific resources with future rent potential (McGrath et al., 1994).

While learning and leveraging seem to be the different sides of the same coin – both are needed to work simultaneously and bi-directionally to intermediate between venturing context and mainstream context, the third linking process is about establishing a context favorable for learning and leveraging to work.

Nesting as defined in this study consists of activities which enable the management of timing and resource allocation within the corporate venturing process and thus is closely related to managing the portfolio of ventures. As concluded in the previous chapters, the speed and magnitude of change and the overwhelming amount of information available today make it impossible for a company to pursue all the possibilities within the range of opportunities. The process of nesting keeps an eye on markets, technologies and business models that are not within the current scope of ventures but which have been recognized as potential opportunities. The purpose of the nesting process is to provide the capability to respond efficiently when uncertainty and ambiguity related to markets and technologies are decreased to the point that the company has enough information to either drop or deploy an opportunity. Nesting deals with the fact that knowledge within a firm may have different utility at different times (Honig, 2001). The nesting process helps companies to maximize the leverage of emerging opportunities by building a "knowledge buffer" and the capability for systematic waiting. In order for the nesting process to work efficiently, a company needs to establish a database for managing opportunities in the nesting phase. McGrath & MacMillan (2000) outline the concept of an opportunity register as a method for holding onto ideas over time. The opportunity register should include a short description of the idea (business concept) complemented with relevant data, trends indicating when it might be feasible, key customer segments, obstacles and barriers that may hinder the development of ideas, company position, competition,

sources of information, type of opportunity and timing for action. They suggest assessing the types of opportunities in terms of the related market and technological uncertainty. While this type of assessment may be valuable in defining the overall portfolio of ventures, it may also be helpful in analyzing the potential of venturing ideas.

The processes of learning, leveraging and nesting are key elements of continuous corporate renewal. They are the underlying, deep-down mechanisms that define interaction between people – the key contributors in the process of innovation which was seen as the source of continuous corporate renewal.

2.4.5 Theories about corporate venturing: conclusions

This chapter has described corporate venturing and the key issues related to managing it in the corporate context. The conclusions that can be drawn from the theories of corporate venturing can be summarized as:

- Corporate ventures and corporate venture capital involve specific challenges compared to their independent counterparts. A corporation's motives for engaging in venturing are rarely only financial. For most companies venturing is a strategic activity and corporate renewal is an important reason to engage in it.
- To act as a source of corporate renewal corporate venturing needs to be managed differently from more mature business activities. A venturing strategy is needed to ensure long term commitment and to define the size and scope of venturing activities. Strategic management of venturing involves dedicated management time and roles. Other key issues in building a venturing context are deciding upon the criteria for structuring and performance evaluation.
- There should be a division between portfolio management and venture management. A key issue in the management of the venturing portfolio is the maintenance of overall direction in order to achieve desired results and protect ventures from unnecessary intervention. As far as internal ventures are concerned the key management issues are building momentum and gaining support for the new business and ensuring that it is not viewed as a threat by the established

business. Management of external ventures calls for close interaction with the venture with phases similar to private venture capital: making the investment decision and committing capital in stages based on the monitored performance of the venture and governance through active board participation.

- Establishing strategic context and management processes for corporate venturing activities are not enough to sustain corporate renewal. This study identifies learning, leveraging and nesting as the deep-down mechanisms that are needed to harness the renewal potential related to corporate venturing. These processes take place in the individual, group and at the organizational levels. A company's ability to sustain corporate renewal through corporate venturing is dependent on its ability to ensure that these processes are working simultaneously and bi-directionally in the corporate context – that is between the mainstream and venturing organizations.

3 Framework of strategic corporate venturing

3.1 The elements of the framework

The theoretical background of this study relates to three streams of literature: theories about strategy and corporate renewal, theories about innovation and theories about corporate venturing which were studied to establish a holistic picture of the issues underlying the link between corporate renewal and corporate venturing.

The first part of theory building focused on theories about strategy and corporate renewal and aimed at enhancing the understanding of the factors that underlie the need for corporate renewal. As a conclusion this study identified eight determinants of strategy and built a framework in which they were linked together. In addition, this study explored the field of corporate renewal and identified the need to institutionalize it in the strategy processes of a company. Furthermore it distinguished between induced strategy processes, strategy formulation and strategy implementation and introduced the need for autonomous strategy making through the process of strategy formation.

The second part of theory building focused on theories about innovation and described the key issues related to strategic management of innovation as a source of corporate renewal. The issues arising from the theories of innovation appeared to link to the need to ensure alignment between overall corporate strategy and innovation strategy and building corporate context and management processes that support innovation. In addition, this study identified four generic strategies for innovation as R&D in the context of the mainstream business, corporate venturing, mergers and acquisitions and strategic alliances. It concluded that each of these strategies has specific management challenges, and left those related to corporate venturing to be the focus of the third part of theory development.

The third part of theory building focused on theories about corporate venturing and the specific challenges related to managing the venturing context as well as the key issues related to establishing management processes related to it. The conclusion of the third

part was however, that establishing a venturing context and managing it systematically is not enough to benefit from venturing as a source of corporate renewal. What is needed is active linking between different contexts – those of venturing and mainstream business. Essential in using venturing as a source of corporate renewal appear to be learning, leveraging and nesting that were identified as the linking processes needed to intermediate between different contexts and management processes.

The themes arising from the literature review common to all three streams seem to be the importance of context, the processes through which the context is managed as well as the linking processes that intermediate between different contexts and management processes. The following chapters explain in detail the different contexts that influence corporate renewal, the layers of management processes and finally the way the linking processes work.

3.1.1 The context

Corporate renewal involves multiple contexts. In reality these contexts are partially overlapping – but logical separation appears to be needed in order to create an environment favorable for innovation and continuous corporate renewal. Based on the theories of strategy, innovation and corporate venturing, this study suggests that in order to sustain corporate renewal through corporate venturing a company needs to have a clear strategic view of the overall corporate context that sets the strategic guidelines within which innovation takes place (innovation context) as well as corporate venturing context which in turn is seen to belong to the innovation context.

Corporate context involves the strategic environment of a company. It is the context in which corporate renewal takes place and in which a company's capabilities are embedded. This study identified eight determinants of strategy as industry, location, resources, knowledge and organizational structure and culture, market, technology and business model. They are the factors that determine corporate context and set the environment in which a company chooses to compete.

Innovation context is a part of the strategic context. It includes a certain *portfolio of businesses* that evolves over time. The innovation context of a company is dependent on the innovation strategies that it chooses to pursue. This study identified R&D carried out in the existing business, corporate venturing, mergers and acquisitions and strategic alliances as innovation strategies that form the innovation context of a company. This study recognizes that each innovation strategy has specific management processes. This study builds on the view of Galunic & Eisenhardt (2001) according to which an organization's ability to create organizational structures according to the type of innovation appears to be a key to success for managing both incremental and discontinuous innovation simultaneously. Essentially, it describes a modern corporation as a dynamic community in which modular corporate resources and processes can be dynamically reconfigured in different contexts. The ones of interest in this study relate to managing innovation in the context of existing business and corporate venturing – with a special emphasis on finding the link between the two. The importance of linking is rooted on the need to dynamically manage venturing as a source of corporate renewal.

Venturing context in turn is a part of the innovation context, and by definition it should be home for projects involving greater novelty and complexity related to markets, technologies and/or business model. The *portfolio of ventures* included in the venturing context evolves over time. The primary target for projects taking place in the venturing context is to create new business - that is to sustain growth and corporate renewal. To enable new business development the venturing context should be different from the mainstream innovation context. Essential is the "right" degree of separation and integration in relation to the existing business.

The importance of identifying different contexts relates to the fact that today competitive advantages are often based on knowledge. Tacitness of knowledge (Nonaka & Takeuchi, 1995) and the fact that it is organizationally embedded (Martin & Eisenhardt, 2001) suggest that companies need to focus not only on the innovation but also on the context in which it is created. Essentially, understanding of the need for different contexts underlies the ability to find what Minzberg (1979) calls organizational configuration – which in the

case of sophisticated innovation requires drawing experts from different disciplines into smoothly functioning ad hoc project teams.

3.1.2 The management processes

The management processes of interest to this study relate to managing corporate, innovation and corporate venturing contexts. This study concluded that continuous corporate renewal can only sustained by institutionalizing renewal, that is, embedding it into the strategy processes of a company. Strategy processes set the scene for innovation and influence a company's choice of innovation strategy. Corporate venturing is identified as an innovation strategy which involves specific challenges and needs to be managed separately from the existing business.

Strategy processes: This study distinguished between induced and autonomous strategy processes. Strategy formulation and strategy implementation were introduced as the induced processes whereas strategy formation was seen as an autonomous process taking place as a response to the changing conditions in the course of operating business. Together these three processes were seen as the processes through which corporate renewal takes place and in which corporate renewal can be institutionalized. This study concluded that in the end, a company's ability to sustain corporate renewal is dependent on its ability to manage the corporate context through these processes.

The first induced strategy process, ***strategy formulation,*** comprises of purposeful attempts to ensure company success in the long term. Management has to be able to recognize and articulate needed changes in the corporate environment and to formalize strategies emerging through the process of strategy formation (Andrews, 1980, Brown & Eisenhardt, 2000, Burgelman, 1994, Burgelman & Doz, 2001, Dranikoff et al., 2002, Eisenhardt, 1999, Eisenhardt & Brown, 1998, Grove & Burgelman, 1996, Johnson & Scholes, 1999, Martin & Eisenhardt, 2001, Rumelt, 1980, Slywotzky & Morrison, 2000). It is complemented by the process of *strategy implementation* which is seen to involve is the building of organizational structures, systems and culture to achieve desired results (Andrews, 1980, Bessant & Francis, 1999, Ghoshal & Bartlett, 1996, Johnson & Scholes, 1999, Martin & Eisenhardt, 2001, Quinn & Voyer, 1994). The third process, *strategy*

formation, differs from the first two as it involves more freedom. Essentially, strategy formation refers to autonomous actions taking place as a response to changing conditions (Burgelman, 1983a, Burgelman, 1994, Grove & Burgelman, 1996, Mintzberg, 1987b, Quinn & Voyer, 1994).

The process of innovation essentially involves managing the innovation context of a company, choosing strategies for innovation and selecting the context in which different ideas are developed further. This study concludes that as each innovation strategy involves specific challenges, management processes should differ depending on the strategy. As mergers and acquisitions and strategic alliances are out of the scope of this study the challenges related to them are not described in detail. The most important issue in managing innovation for sustaining corporate renewal is framing the innovation challenge and *assessing innovation* in order to choose an optimal context for its development. This study suggests dividing innovation into its components (market, technology and business model) and assessing novelty and complexity related to each component as a method for doing so.

This study introduced *innovation assessment framework* (Chapter 2.3.5., Figures 9 & 10) as an essential element of managing innovation as a source of corporate renewal. It is a tool which can be used to first map and analyze opportunities as they emerge and then to compare a company's existing position in relation to the new opportunity. This study suggests that ultimately a company's ability to sustain corporate renewal depends on its ability to recognize opportunities for market, technology and/or business model innovation and to develop them in an optimal context. It concludes that essential in achieving this is the assessment of novelty of each component of innovation to determine the renewal challenge related to it and the assessment of complexity to determine the business potential related to it. It notes that both novelty and complexity are always relative to the corporate context, that is, a company's existing position and competencies. This study suggests assessing opportunities first to decide if they seem to have renewal potential and business potential and secondly to consider an optimal organizational position for an opportunity in question.

The corporate venturing process involves managing the portfolio of ventures and managing the individual ventures (both external and internal). ***Portfolio management*** involves building a portfolio of ventures taking into account a company's venturing strategy: the predefined size and scope of venturing activities (Coveney et al., 2002). Its importance lies in balancing autonomy and control (Block & MacMillan, 1993, MacMillan & George, 1985, Simon & Houghton, 1999) and providing venture managers with the necessary guidance (Mason & Rohner, 2002). *Management of internal ventures* involves choosing strategy for a venture and deciding how aggressively a venture will pursue it (Simon & Houghton, 1999) while adjusting to the corporate context (Burgelman, 1983) and making sure that the plans are "politically correct" (Block & MacMillan, 1993). The choice and motivation of venture management and personnel are therefore important factors behind venture success (Block, 1982, Block & MacMillan, 1993, David, 1994, MacMillan & George, 1985, Zajac et al., 1991). The third process, *management of external ventures* includes defining primary motives for starting an external venture and structuring it accordingly (Chesbrough, 2002). Active participation in ventures is important and so are phased investment decisions based on monitored performance (Chesbrough & Socolof, 2000, Markman et al., 2001, Keil, 2002).

Central to the need for strategic management of innovation in and corporate venturing as a source of corporate renewal are the facts that most of the ventures fail (Block, 1982) and that it takes a long time to build new business (Biggadike, 1979). This study suggests that it is essential to build the mechanisms needed to harvest the benefits of those ventures that did not become successes in commercial terms – a task that was seen to demand efficient linking between different contexts and management processes.

3.1.3 Linking processes

This study has so far based an understanding of the importance of the context in which corporate renewal takes place and the management processes needed to guide the context. As far as corporate level is concerned it has introduced the determinants of strategy as well as the processes of continuous corporate renewal. Concerning the overall innovation context of a company it has noted the importance of choosing an optimal context and

introduced a framework for assessing innovation to determine renewal potential and business potential of a given innovation. Corporate venturing should, by definition, involve activity that is further away from the mainstream business and thus have greater potential to renew the company. Yet, there is a risk of not achieving the desired renewal effect if the venturing activities are not efficiently linked to the mainstream business. Hence, the need to linking processes.

This study identified three linking processes that are essential in an attempt to generate corporate renewal through corporate venturing as learning, leveraging and nesting. In the context of corporate venturing the process of *learning* aims at systematic learning about and exploration of changing markets, technologies, business models or about venturing itself (Block, 1982, Burgelman, 1983a, 1983b, 1984, Garud & Van de Ven, 1992, Hamel, 2000, Keil, 2002, Sinkula, 1994, Tidd, 1997, Tidd & Taurins, 1999). Essentially, learning is knowledge creation which involves the initiative of an individual and interaction within a group (Nonaka & Takeuchi, 1995, Scharmer, 2002). *Leveraging* in turn is about exploitation, making the most of the resources and capabilities a company already has (Honig, 2001, Keil, 2002, Sinkula, 1994, Tidd & Taurins, 1999). In addition, there is the process of *nesting* which essentially means building the ability to manage timing and resource allocation within the corporate venturing process (McGrath & MacMillan, 2000).

3.2 Constructing the framework

3.2.1 Relation between the elements of the framework

This chapter proceeds through describing the ration between the elements of the framework of strategic corporate venturing which is illustrated in the Figure 13.

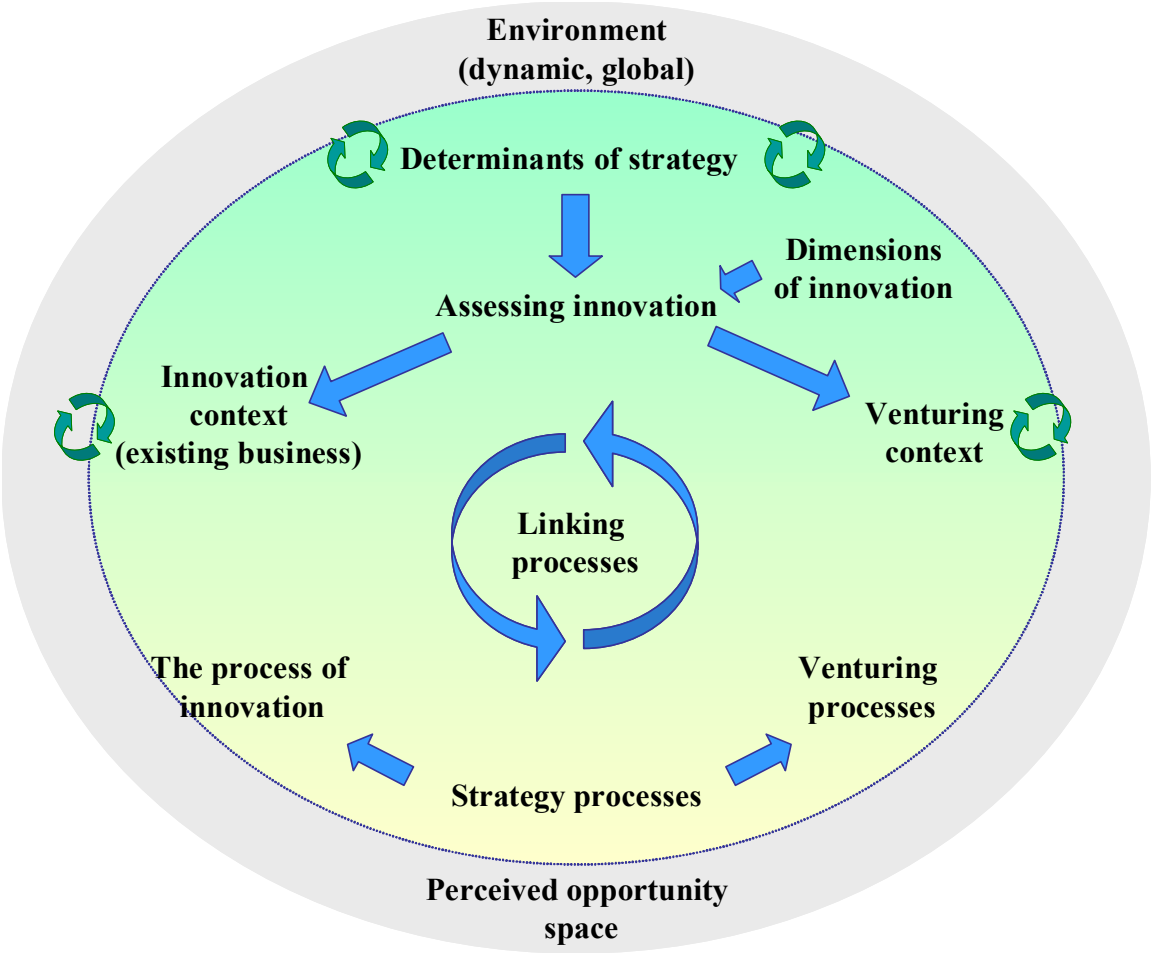

Figure 13 Linking the elements of the framework of strategic corporate venturing

Moving from outside inwards, the elements of the framework involve first the *environment*, which is dynamic and global. For any company, its environment is however only a partial view of all opportunities. A company's history influences the way it perceives the environment. So at any given time, a company's environment is always a subset of all opportunities – which in this study is called *perceived opportunity space*. Moving to the inner circle, the company, the upper half includes the *contextual elements*: that is the determinants of strategy (industry, location, resources, knowledge, structure and culture, market, technology, business model) as well as dimensions of innovation (novelty and complexity) that are used as a basis for assessing innovation and if found to be worth pursuing, choosing an optimal context to develop it further. The bottom half, includes the managerial elements: the strategy processes through which continuous

corporate renewal takes place (strategy formulation, strategy implementation and strategy formation) as well as the management processes involved in managing the innovation context of a company as well as the venturing context of a company.

In the center of the Figure 13 are the *linking processes*. Their role is essential in intermediating between different contexts and management processes. This study concludes that, in essence, the efficient linking processes are the key to sustaining corporate renewal through corporate venturing.

The aim of this chapter was to build a through understanding of the way that the elements of the framework of strategic corporate venturing relate to each other. The following chapter proceeds to the actual framework. It describes the rationale of engaging in corporate venturing from an established company's point of view, positions venturing in the corporate context and illustrates the way it can help to sustain corporate renewal in that context.

3.2.2 The framework of strategic corporate venturing

The framework of strategic corporate venturing presented in the Figure 14 illustrates an established company and its environment and the relation between corporate renewal and corporate venturing.

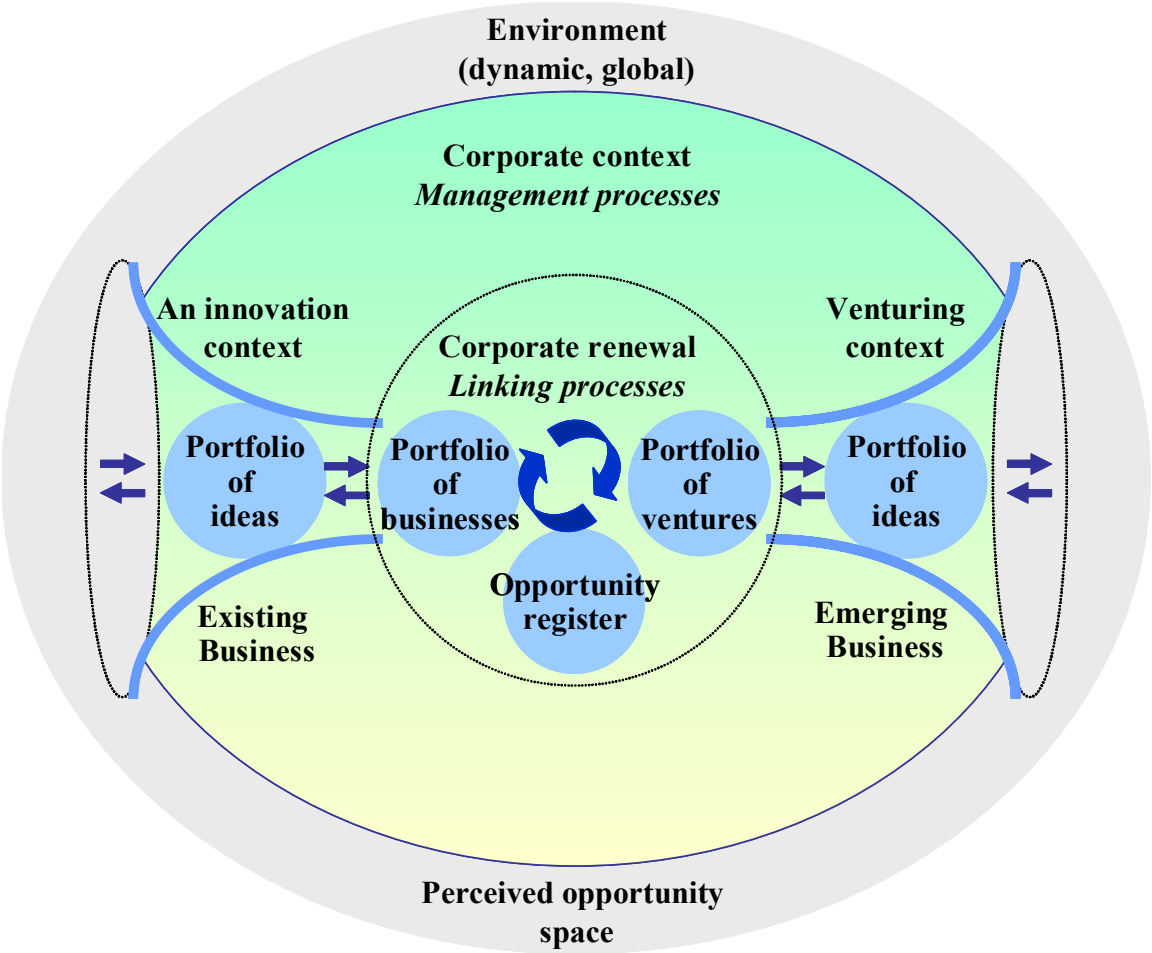

Figure 14 The framework of strategic corporate venturing illustrates a company operating in a global and dynamic environment. Corporate venturing is seen as a strategic tool in building multiple views of the environment. Essential in harnessing its renewal potential is realizing the importance of different contexts and management processes related to them as well as developing the linking processes that intermediate between different contexts and management processes.

The framework of strategic corporate venturing builds aims at enhancing the understanding of issues related to using corporate venturing as a source of continuous corporate renewal which was concluded to be a key element of survival in today's dynamic and global marketplace.

The first rationale behind the framework of strategic corporate venturing is linked to **the importance of context**. Like concluded earlier in this study, a company's view of its environment is always limited by its history (Christensen, 1997, Tushman & O'Reilly, 1996). Hence, it appears that organizational context does influence a company's perception of the opportunities available for it. The framework takes contextuality into account by highlighting the need for a corporate venturing context which is different from the innovation context of the existing business. The value of venturing from the context point of view is then in enhancing a company's view of opportunities – that is developing *a portfolio of ideas* that is different from the one of the existing business. The two funnels represent these two views: the traditional leftwards opening funnel illustrates the idea channel of the innovation context of the existing business and the rightwards opening funnel, that of the venturing context.

The second rationale, relates to **the importance of management** and management processes. The cornerstone of using venturing as a source of continuous corporate renewal lies in rooting it in corporate strategy. Building on the strategy, it is then essential to understand the importance of institutionalizing renewal in the strategy processes or a company. Another part of strategic management of venturing is the ability to decide which innovations are suitable to be developed as ventures. In many cases new opportunities do not appear profitable when traditional measures are used to assess them. This study suggest assessing novelty and complexity related to the market, technology, business model in order to determine the renewal challenge and the business potential related to a given innovation. It proposes using them as a basis for choosing an optimal development context – and suggests developing innovations with higher degree of novelty to be developed as ventures if of course the business potential is found sufficient. At any given point of time a company should consider the location of an innovation within the *portfolio of businesses* or the *portfolio of ventures*. In addition, as presented in the middle of the figure companies should use an *opportunity register* to keep track of opportunities that do not fit the current scope but whose potential should be further evaluated. So in this sense, innovation assessment framework is a tool that should be used to dynamically adjust the portfolio of businesses and portfolio of ventures along changes in its business environment.

The third rationale considers **linking processes** and positions them, along the strategy processes of a company, at the heart of corporate renewal. This study highlights active linking of existing and emerging businesses through processes of learning, leveraging and nesting and underlies their importance as enablers of efficient knowledge sharing. As ventures mature they may become a part of an existing business or entirely new businesses. Thus corporate venturing has the potential to sustain corporate renewal by initiating a series of actions for changing the strategic direction of a company. And even if the ventures fail (like most of them do) efficient linking mechanisms ensure that the knowledge gained in the course of venturing is not lost, but rather applied in the corporate context. Ultimately, this study proposes that the commercial success of a venture may not be the key issue in driving corporate renewal. Instead, it suggests that by developing efficient linking mechanism between the innovation context of the existing business and the venturing context may ignite corporate renewal and furthermore act as a catalyst for the renewal process.

3.3 Operationalizing the framework

The Figure 15 proceeds to illustrate how the framework of strategic corporate venturing is operationalized.

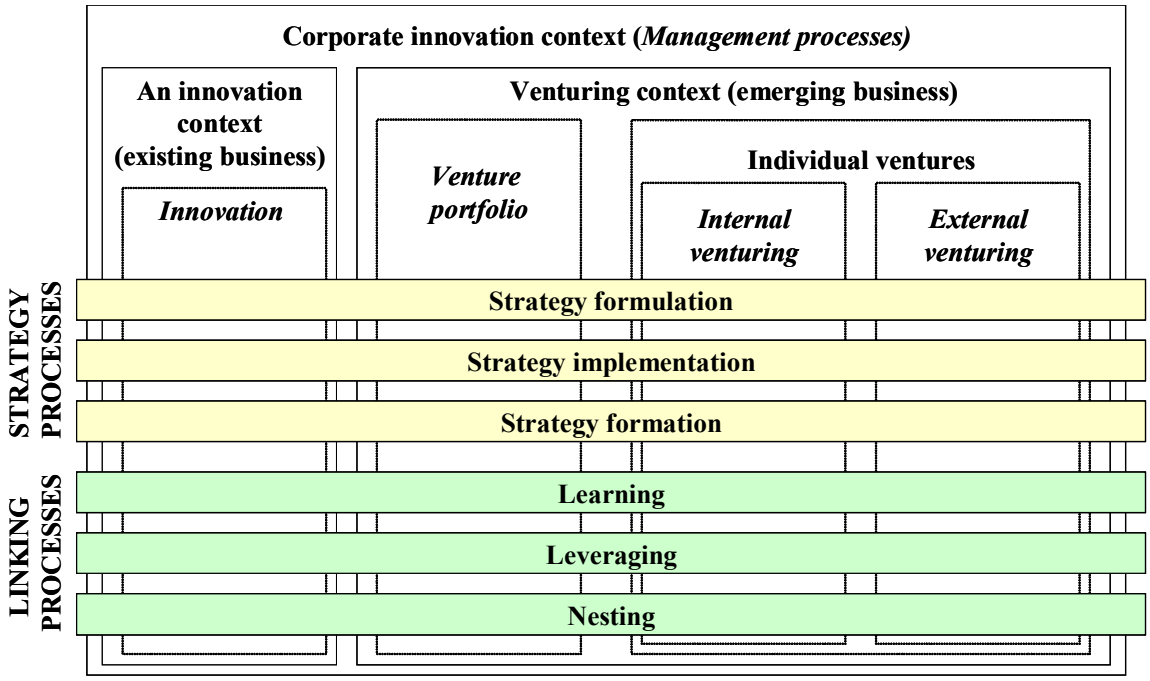

Figure 15 Mechanisms of continuous corporate renewal through which corporate venturing may help to sustain corporate renewal are identified as management processes (strategy, innovation, corporate venturing) and as linking processes (learning, leveraging, nesting).

The vertical elements of the Figure 15 illustrate the context of continuous corporate renewal, which is seen to involve *the corporate (innovation) context*. The corporate context is further divided into *the innovation context of an existing business* and *the corporate venturing context*. Like concluded earlier, both sub-contexts involve specific management processes (implied in the figure with *italic*). The focus on this study is more on the venturing and thus as far as management processes are concerned the figure does emphasize the importance of portfolio management and the management of internal and external ventures.

The horizontal elements of the Figure 15 illustrate the processes of continuous corporate renewal. Of these the strategy processes, strategy formulation, strategy implementation and strategy formation were characterized as management processes that deal with the overall corporate context. For their part they define the context for innovation in general, underlie decision to engage in venturing in the first place and influence the way venturing

context is structured and managed. The linking processes, like strategy processes, concern the entire corporate (innovation) context. They are the deep-down processes that take place in the individual and group levels. As such they may be at least as essential in achieving corporate renewal as the strategy processes.

4 The empirical observations

4.1 Gathering and analyzing the data

Validating the framework of strategic corporate venturing appeared as a very difficult task due to its holistic nature – the fact that it essentially covers the "entire universe" from an established company's point of view. However, I decided to tackle the "bull by its horns" and proceeded through the validating challenge by focusing on the key elements of the framework: the context, the management processes and the linking processes.

There were three distinct challenges related to the empirical part. The first challenge related to the selection of the case companies and interviewees, the second to carrying out the interviews and the third to analyzing and interpreting the data. The following chapters describe the specific issues related to each of these three challenges.

4.1.1 Selection of the case companies and interviewees

The first task in validating the framework was to find companies that would be interested in participating in this study. The main criteria for choosing the companies were identified as: 1) companies needed to be large, 2) they needed to be established and 3) they needed to have experience in venturing. This study defined a venture as *a strategic new business development project focusing on corporate renewal.* Thus experience in venturing did not necessarily mean having a dedicated venturing unit.

Nokia appeared as an interesting company for quite obvious reasons: it is the most successful Finnish company of the last decades; it is well known for its innovativeness and has been pursuing a strategy of active renewal. Furthermore, my background at Nokia Networks helped to find the key people who both had the interest and authority to make the decision to study Nokia. Also, TeliaSonera, a Nordic telecommunications participated to the study. In addition, Metso, a large company producing mining and

paper production machinery, was contacted to expand the applicability of this study to beyond the telecommunications industry in which both Nokia and TeliaSonera operate.

The next challenge was then to find the interviewees that could provide valuable knowledge of the multitude of issues related to the framework of strategic corporate venturing. Interviewees were selected to provide a view of the corporate (innovation) context and the venturing context within it and the management processes related to both of them and to enhance our understanding of the linkage between corporate venturing and corporate renewal. Thus the interviews were not limited to the venturing organization but also involved people from the existing business. The Table 7 summarizes the organizational position of the interviewees by company.

Position / Company	**Metso**	**Nokia**	**TeliaSonera**
SVP/VP corporate management	2		1
Project engineer corporate management	1		
SVP/VP/director existing business	2	5	2
SVP/VP/director venturing (portfolio)	1	3	1
Director/manager (venturing)		6	
Program manager (existing business)	1	1	
All	17	15	4

Table 7 Interviewees by company and organizational position

The process through which the interviewees were chosen was different in each company and depended on the way venturing was organized. Thus it will be explained in detail in the following chapters and illustrates in Figures 17 (Metso), 19 (Nokia) and 21 (TeliaSonera).

4.1.2 Carrying out the interviews

The data collection took place during an intensive two and a half month period in 30.7.-15.10.2003. The interviews were carried out in the companies' premises and took 1-2 hours each. In the beginning the researcher asked a permission to tape the interview, and in most cases it was allowed. Due to the holistic approach and complexity of the subject the interviews were conducted and analyzed by one person, the researcher. The interviews approached the topic in two levels. The first level was to observe the corporate level importance of corporate renewal and corporate venturing within corporate context.

The second level was to study individual ventures to see if they had potential for corporate renewal, how the ventures proceeded in their development and finally the outcomes of the ventures. Distinguishing between the corporate and venture levels was seen necessary to have a view of the "both sides" and to achieve the purpose of this study: enhance our understanding of the linkage between corporate renewal and corporate venturing.

The decision not to form questions but rather cover the topics that had risen from the theoretical part by providing the interviewees with a "map of topics" was also a result of the explorative nature of the study. The Figure 14 illustrates the "map of topics" which in essence covers the key themes of the theoretical framework that already existed prior to the interviews. The decision to not form questions was driven by the chosen qualitative hermeneutic research strategy. I felt that asking direct questions would direct the topics towards the theoretical findings. In addition, in my opinion a "less specific" interview would provide richer data about the topic and help to avoid bias – just hearing what one wants to hear.

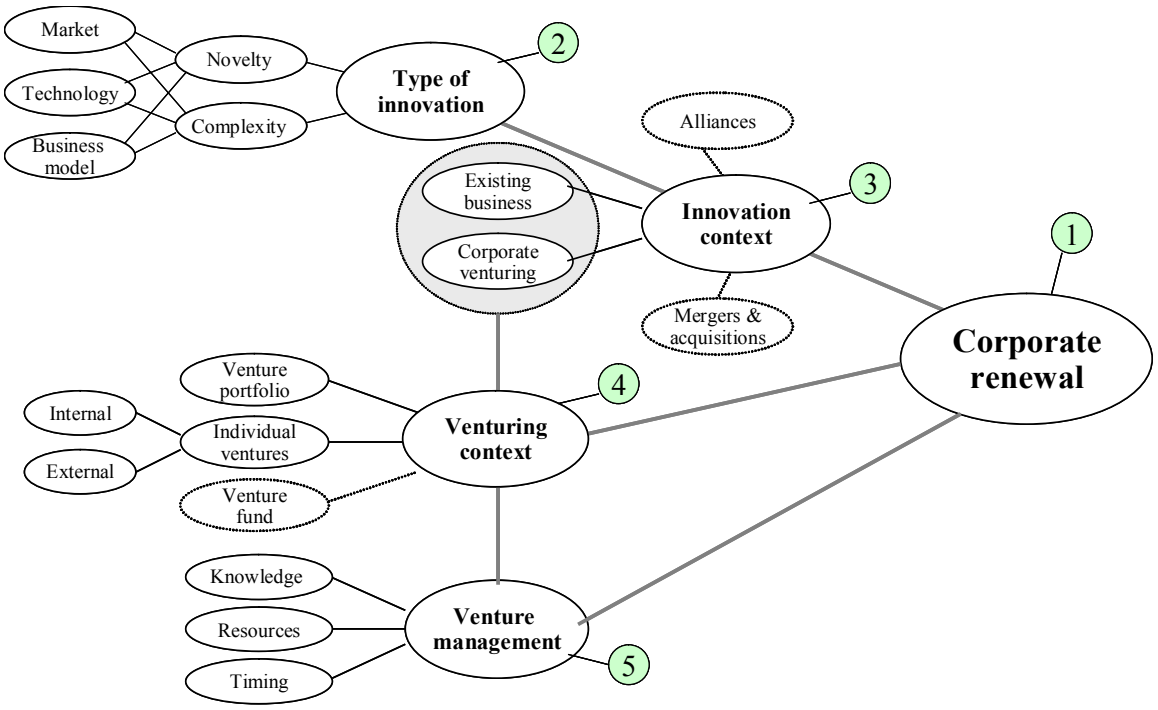

Figure 16 The "map of topics" that was discussed during interviews.

The main components discussed during the framework involved the key elements of the framework. The numbers in the Figure 16 refer to the topics essential to validating the framework of strategic corporate venturing. These can be specified as:

1. The first item on the map "corporate renewal" is a key concept in this study. The interviewees were asked about the overall importance and characteristics (need, sources) of corporate renewal their perception about the means of corporate renewal in use in their company.
2. The second item "type of innovation" is linked to novelty and complexity of market, technology and business model aimed at discovering the importance of innovation assessment and the influence of the type of innovation to the organization of development activities. At the venture level this was to define whether a venture was really different (and how different) from the existing business.
3. The third item "innovation context" refers to the corporate context in which corporate renewal takes place. It is seen to include two parts: the existing business and corporate venturing. As this study defined venture as a project aiming at corporate renewal. Hence it did not focus only on ventures as a part of the existing business but rather looked for projects that fitted the definition of a venture. The aim of discussing the importance of the innovation context was in uncovering the characteristics of the corporate context and exploring the differences between innovations developed by the existing business and by the ventures.
4. The fourth item "venturing context" was included to discuss the different modes of venturing used by the companies and finding out the key criteria for managing the venturing portfolio and the ventures within it
5. The fifth item "venture management" concerned mostly the ventures. It took the analysis down to the venture level and assessing the challenges related to managing venturing in the corporate context. Choosing the three sub-themes related to exploring the existence of the linking processes. Knowledge was included to explore the importance of learning and leveraging, timing was included to discover if nesting was taking place and the importance of resources

was discussed to enhance the understanding of the scarceness of resources and their impact on the venture.

Of course other themes arose during the discussions. However, the map, from my point of view worked well and did keep the discussion in line with its targets. And indeed some of the topics that were "off the map" were indeed very interesting and did indeed enhance my understanding of the topic – and as such helped to achieve the aim of this study. After an intensive data collection phase the next step was then to move on to analyzing the data, interpreting the results and linking the empirical part to the theoretical findings.

4.1.3 Analyzing the data

Alasuutari (1999, p. 39) describes qualitative analysis as a process of solving the riddle which is proceeds through two analytically separate phases: simplifying the data and problem solving, which in practice however take place simultaneously. The analysis phase took a lot of time, and during the process I virtually learned the interviews by heart. Since the interviews were carried out by using the "map of topics" (illustrated in the Figure 14) the data was rich but somewhat fragmented and thus it took a while to make sense of it. My goal, during the data analysis phase was to try to avoid bias and focus on not loosing the details. So in that sense I applied a research strategy which is closer to a classic case study (Dyer & Wilkins, 1991) rather than theory building of case studies (Eisenhardt, 1989) with a focus on deep understanding of a particular social setting and, providing a rich description of it rather than testing hypotheses.

The interviews were carried out in Finnish (all the interviewees were Finns). The first task before analyzing the data was thus to translate them to English. In addition to the interviews, documentation about the management processes and venture development provided by the case companies was used as a source of information to verify the reliability of the data whenever available. The data analysis can be seen as a process consisting of five distinctive steps that are described in the following.

The framework of strategic corporate venturing was used as the basis for analyzing the data. The first step in **applying the framework to the data** was to sort the interviews by

topics included in the framework. The second was to **divide the data** to corporate level and venture level issues. The third phase focused on collection of **background** information to support the interview material. This phase summarizes the companies' articulated strategy and structure and acts as basis for understanding the perceived importance of corporate renewal for them.

The fourth phase involves a **corporate level analysis** of the case companies to describe the basis of competitive advantages of each company. In this phase the essence was in exploring the role of strategy, corporate renewal and innovation by analyzing the determinants of strategy and using them to characterize change taking place in companies' strategic environments. In addition the role of corporate venturing was analyzed by viewing the reasons for venturing, the way venturing is managed at the corporate level, corporate level challenges related to venturing and the way venturing is linked to the existing business. The determinants of strategy illustrated in the Figure 6 were operationalized by identifying the issues related to them presented in the Table 8. Moving into a more detailed level in terms of analyzing the determinants of strategy helped to form an understanding of the strategic position and characteristics of each case company. It also acts as a basis for understanding the change and factors driving it.

Element	**Location**	**Industry**	**Resources**	**Knowledge**	**Structure and culture**
Market	Geographical distribution	Which industries?	Influence of resources on market understanding	Level of market understanding	Current structure
Technology	Location dependency	Technology base?	Influence of resources on technology adaptation	Level & type of technological knowledge	Distribution of technological knowledge
Business model	Local benefits or limitations	Limitations?	Bottlenecks	Recognition of key factors	Level of flexibility

Table 8 Operationalizing the determinants of strategy.

The fourth step involved analysis of the **individual ventures** and their position in the corporate context as well as the challenges they encountered during development. The venture level analysis also aimed at understanding the renewal effect (if any) the venture had and the mechanism through which renewal took place. The final challenge in the data

analysis was to come into conclusions and estimate the applicability of the conclusions taking into account the limitations set by the data.

4.2 Metso

4.2.1 Background

At least four of the companies forming part of the present Metso Corporation date back to the 19th century. Metso, as it is today, was created through the merger of Valmet and Rauma in 1999. Valmet was a paper and board machine supplier. Rauma's operations were focused on fiber technology, rock crushing and flow control solutions. The merger created an equipment supplier serving the global process industry (www.metso.com / The history of Metso). In 2003 Metso's turnover was 4250 MEUR and it employed approximately 26 240 people (www.metso.com).

Metso's vision is to be the leading knowledge-based, technology company. Its strategic goal is to transform from a machine supplier into a provider of competitiveness. The aim is to improve the productivity and competitiveness of its customers' core industrial processes. Metso's strategic focus areas are improving profitability, streamlining the cost structure, strengthening competitiveness and the balance sheet and implementing the life cycle business approach (www.metso.com /vision and strategy).

Life cycle business refers to the development of solutions that help customers to maximize the economic benefit from their processes throughout the life cycle of their machinery and equipment. This comprehensive product and service offering covering the whole life cycle of customers' processes includes new installation investments, maintenance and service, process improvements, as well as modernizations and rebuilds (www.metso.com /life cycle business).

Metso has organized itself into three business areas. In addition Metso has a venturing unit (www.metso.com /Metso in brief/corporate structure).

- **Metso Paper** designs and manufactures pulp and paper industry processes, machinery and equipment and provides expert services for developing customers' production processes. It accounted for 38% of Metso's turnover in 2003.
- **Metso Minerals** develops, designs and delivers equipment and total solutions for the drilling, crushing, grinding, beneficiation, screening and transport of rock and other minerals. In 2003 its share of Metso's turnover was 38%.
- **Metso Automation** develops, designs and supplies application networks and systems and field solutions for automation and information management in the process industry. Its share of Metso's turnover in 2003 was 12%.

Metso Ventures is a development unit for businesses that serve Metso's other businesses or are under strategic development. In addition, it forms an organization for potential future businesses. In 2003 its share of Metso's turnover was 9%. It comprises of five business lines: Panelboard, Drives, PowderMet, Valmet Automotive and LokomoSteels.

4.2.2 Interview structure

The first person to be interviewed in Metso was the Senior Vice President of Corporate Venturing. He provided a list of people from the corporate level that could provide valuable insights for this study. These included people from corporate level. The first interview and the following interviews with SVP of Corporate Planning and SVP of Corporate Technology however suggested that in Metso, corporate venturing division was not a unit linked to corporate renewal. Rather, it appeared that due to the historical reasons the two main divisions Metso Paper and Metso Minerals were driving renewal efforts related to their businesses. The next step was then to interview people from both of these units and find an example of projects aiming at corporate renewal from both of them. These projects were identified as tire recycling and fiber separation of waste. Since tire recycling was carried out in the USA, the VP from Metso Minerals did act as a source of information related to that project. As far as the other venture was concerned the project manager was interviewed. The Figure 15 illustrates the organizational position of the interviewees. As it appeared that Metso's formal venturing organization was rather a

restructuring unit than a source of corporate renewal, the ventures within it (indicated with a yellow background) were left outside the scope of this study.

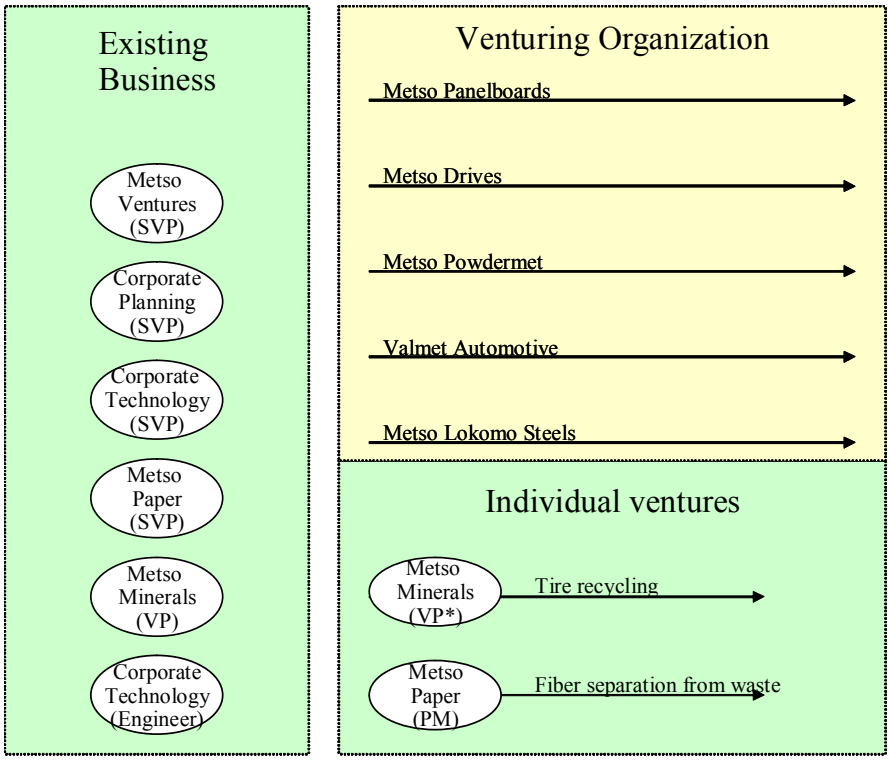

Figure 17 The interviewees from Metso by title and organizational position.

4.2.3 Determinants of strategy

This chapter deals with the corporate level challenges of Metso and approaches that challenge by describing the determinants of strategy as they are today and identifying the elements of change related to them.

The first determinant of strategy, ***industry,*** directs the attention in Metso's case to the two main industries in which operates: paper production and mining. These two industries are quite different in terms of development cycle. In Metso Paper's case it can be as long as 7 years, whereas in the Mineral's case it is shorter. But these two industries do have some common characteristics. Both involve complex processes taking place in extreme conditions fared with high reliability requirements and seem to be changing to the same direction. In both mining and paper and pulp production industries current change relates

to the existing customers' need and willingness to outsource their services and maintenance which is opening new opportunities and is also in a sense making them more dependent on the equipment providers. In addition, Metso is involved in the emerging environmental industry. It already has solutions for related to the paper recycling and waste (metals) shredding and crushing. However, today these environmental businesses are organized as a part of Paper and Minerals business units.

The second determinant of strategy, *location*, is important for Metso. The market drivers and magnitude of change are different in different parts of the world. Europe and North America are driven by installed base. In China, Asia and South-America market is driven by new installations and opportunity to establish new production lines and related support services. Metso Paper benefits from the Finnish paper production cluster. The fact that its largest customers, StoraEnso and UPM-Kymmene, are Finnish enables close cooperation with them. Metso Minerals is supplying almost every mine in the world. Through its global position it possesses intimate knowledge of customer processes. The renewal challenge in terms of location is about being local and global at the same time. In order to establish itself in the services market Metso needs to shift its development from large scale, global, long term projects to small scale, local, rapid applications development and understand the different characteristics of the different market areas.

For Metso *resources* and *knowledge* are intertwined. Metso actively seeks synergies in terms of resources, markets and technologies. The aim is to ensure that the same issues are not tackled in multiple locations. In addition Metso seeks to share distribution channels and locations when possible. Common technologies are considered when starting new development. Metso's knowledge base in both Paper and Minerals is in developing complex machinery. In order to establish itself as a service provider Metso's engineers need to adapt to an environment where the outcome is less tangible. That requires development of a service orientated mindset. Indeed, it is about harnessing the existing technological (process) knowledge to create service applications. As an attempt to do so, Metso is engaged in continuous training of existing personnel. It is also recruiting new people despite simultaneous downsizing. Metso has been well-positioned as an employee, but today's economic conditions may have worsened its position.

In enhancing the scope of Metso to include services *structure and culture* appear to be in a central role. Metso is a combination of very different companies thus "silo thinking" in business units is strong. Valmet (Metso Paper) was a centrally lead company. Rauma (Metso Minerals) was a distributed company. As a result Paper and Minerals are strong divisions, Automation is weaker. These divisions are focused on making profit. Ventures are run separately from the existing business to not to be a burden for them. Culturally the two units have one thing in common: a strong faith on technology. Organizational flexibility is limited. Metso is a machinery manufacturer and thus service culture does not exist. The renewal challenge is however common to both divisions: in order to make the transfer from machinery to services they need to develop a service culture and acquire knowledge related to it.

"Paper and Minerals are strong divisions, Automation is more like a walking stick or a third wheel." VP, Metso Minerals

As far as *market* is concerned Metso is in a strong position. Metso Paper's share of global paper machine markets is 30-35% and Metso Minerals supplies some 20% of global markets for mineral crushing, grinding and screening systems (www.metso.com). The services market is new to Metso, and the challenge is in capitalizing on the complexity related to it. It relates to understanding customer needs as the market driver is shifting from new installations to the installed base. Market understanding is the cornerstone of Metso's own development. Through its large installed base (both Paper and Minerals) Metso has an opportunity to close relations with existing customers. The challenge underlying understanding customer needs is that engineers often mistake customer needs to mechanical problems. The key issues in understanding the market are good relations with existing customers, trust, common language and understanding that the customer needs change as well. To gain a deeper understanding one needs a service mindset and move off-defense – to be more proactive.

Metso's *technology* base is strong. It builds on paper production and related technologies (Paper), in rock handling and related technologies (Minerals) and linking automation solutions (Automation, Drives) and materials technologies (PowderMet, Steels) Most technologies are business unit specific, but the role of common technologies (future care,

industrial design, material technologies and IT & service logistics) is significant. Metso has recognized the need for new kind of technological competencies to build new applications. Its aim is to understand and take into use technologies that are owned by customers, subcontractors, etc. Even though technologies appear to be quite different in the future Metso seeks to share technologies across business units more and use IT as a part of existing solutions to build services around them.

Metso's *business model* is product centered (machinery). In its case the challenge is to find a business model that enables profitable service provision. Business model innovation is needed to transfer Metso from machinery supplier to services provider. It is something that could be improved in Metso. One way would be to focus on recognized customer need and develop a business model for it assuming that technologies needed to make it happen will be in place with time.

The following Table 9 illustrates the business environment in which Metso operates and summarizes the key issues related to the determinants of strategy in Metso as indicated in the Table 8.

Element	Location	Industry	Resources	Knowledge	Structure and culture
Market	Global operations, global customers and competitors, geographically different customer needs	Paper and pulp production machinery, mining machinery, role of IT in both?	Technologically orientated marketing organization	Market understanding focused on technological problems	2 mainstream divisions with very different focus, "silo thinking"
Technology	Majority of R&D in Finland, need for local partners in service development	Industry specific technologies	Focusing resources on technology that truly adds value for customers	Strong competencies in industry specific technologies, and materials and automation technologies, understanding of IT needed	Existing divisions have limited possibilities for technology sharing
Business model	Different drivers in different regions, service orientation calls for local business models (that can be later globalized)	Business models quite similar in both industries, differences in magnitude and speed	Limited understanding of the importance of business model	Too technology orientated knowledge base, need for cooperation in order to become more service orientated	Service culture and organization needed in order to move beyond equipment sales

Table 9 Illustrating change in the determinants of strategy in Metso

Analysis of Metso reveals that in its case technology dominates: its resources and knowledge are strongly industry dependent and organized in separate business units that have limited opportunities for knowledge sharing. Technology also seems to dominate Metso's approach to market and business model. As Metso wishes to expand its scope beyond equipment delivery it needs to build local market understanding, and focus on developing business models and technological solutions that match the needs of individual customers. Even though the technology bases in the two main industries are different, the challenges seem to be quite similar: The challenge of corporate renewal for Metso is about understanding customer needs and developing solutions that match these needs both in terms of equipment and services. As far as this study is concerned the next challenge is to identify how innovation and corporate venturing fit among the means to respond to that challenge.

4.2.4 Innovation strategies and corporate venturing

Metso invests some 3-4% of its revenue in innovation (internal development). Like other companies in its industries, Metso has been active in mergers and acquisitions and divestitures. In addition Metso is involved in cooperation (joint ventures) and venturing. Service development is driven by cooperative agreements (minority investment). It builds on Metso's process knowledge and local partners. Furthermore, Metso has made investments in venture capital funds in areas close to it (environment, service development). In Metso business units work on ideas that link to their existing businesses. It seeks to find new approaches by focusing on corporate level themes, putting young professionals together and on active screening of environment. Metso's business units manage innovation by their own processes, but corporate level innovation process is being created. The innovation process has challenges along the way: some relate to finding ideas (harnessing creativity) as well as developing them further (implementation).

The key criteria for assessing innovation are link to existing business and available resources. If an idea relates to existing business it is not hard to get it accepted in Metso, but for more radical ideas the situation is different. The ideas are first assessed in the business lines and if needed put forward to corporate level (corporate technologies). Assessment involves taking the risk into account. As an engineering company Metso has been risk adverse. The attempt to move to services involves greater risk which can be tackled by small scale projects with focus on learning by doing. Risk is also personal – a machine engineer does not become a service provider overnight. The key issues for structuring internal development relate to resources and timing. Ideas are managed systematically (database). There are a lot of projects ongoing, maybe even too many. Corporate technologies keeps track on projects and sorts them based on state and size. It also tries to organize development projects according to their needs which may change along development.

As far as Metso's venturing unit is concerned it is more of a home for heterogenic businesses rather than a unit driving corporate renewal. That is not necessarily a desired

state, and Metso is trying to define the role of its venturing unit. The future role involves in investing in new areas and finding ideas that enable growth and renewal. The target is to develop Metso Ventures into an organization with more freedom and capability to pursue riskier strategies and more rapid development. Other possible role for Metso Ventures is to develop services and test markets.

Metso's current ventures have a strategic link to the existing businesses, but do not "fit in". Yet they may even share customers. Metso Drives and PowderMet supply both Metso Paper and Minerals. Ventures are partly funded by their incoming cash-flow (divestitures) and partly by Metso Corporation (areas that are not covered by the business units). There is a need for alternative funding mechanisms. The role of the corporate technologies –unit is to seek external funding. Metso's target has been to increase the value of the businesses in the venturing unit and it has succeeded in doing so. There are positive outcomes of taking businesses in the venturing unit: focus on selected businesses and management commitment has proven important and created an enthusiastic atmosphere. However, market has been informed that ventures are for sale. Other exit options for ventures include restructuring, development of operations by own R&D or through a possible merger or acquisition. Positive development may also lead to a formation of a new business area.

"If a venture does not have a strategic link to Metso's business it will be divested". SVP, Metso Ventures

In addition to Metso Ventures Unit Metso has "venture like" development aiming at corporate renewal organized as a part of the mainstream businesses. The distributed mode is likely to continue, since the two core businesses are quite different in terms of knowledge. In addition Metso is investing in the venture funds.

Metso's ventures are rooted in its existing value chains (paper, minerals). As far as portfolio management is concerned (that includes both the venturing organization and venturing in the business units) strategic link is the key management principle. Metso is deploying a corporate level innovation process. It means that the ventures in the venturing organization and in the existing business will be managed according to the same criteria. In Metso the ventures organization has its own board which makes

decisions related to it. Business units make decisions related to ventures managed within them.

"Metso Ventures has its own board which is chaired by the president of Metso. The members of the board involve people from all business units. Its authority is recognized throughout Metso." SVP, Metso Ventures

In Metso, the management challenges related to corporate venturing were identified as management attention, protection from existing business and developing "drive".

4.2.5 Venture level issues

The two ventures aiming at corporate renewal both link to the emerging environmental industry. Overall it appears to be an area involving significant uncertainty and risk. The environmental business is a strictly regulated area that involves municipal and national organizations. The challenges relate to size of the business (not known), undefined competitive landscape and resulting lack of "natural buyers". The risk related to the environmental industry links to its regulated nature – while entry in an emerging industry in an early phase could yield first mover benefits by the ability to shape the rules, in the case of the environmental industry the regulators' involvement makes that kind of "shaping" very difficult.

The following brief descriptions of the ventures present the characteristics of the solutions developed by the two Metso ventures.

Venture 1: Tire recycling (Metso Minerals) has been developed based on existing business. It takes in old tires that are burned in a controlled environment (O_2, temperature) after shredding. It results in carbon black (which can be used as a raw material in the rubber industry) and energy. The technology used in the process is based on Metso Minerals existing technologies. There is a market need for tire recycling but a "natural customer" is lacking. Thus uncertainty related to the business model is high. At the time of the study the development was frozen, but a decision to offer the solution in Europe had been made.

Venture 2: Fiber separation from waste (Metso Paper) was a spin-off from the corporate level idea of an urban paper mill. The process takes in waste and separates fiber from it resulting in raw material for paper production and energy (the reject is burned). The technology used in the process is based on Metso Paper's existing technologies (paper recycling). The market focus is different from Metso's existing business. To reduce the uncertainty related to the market and business model Metso is cooperating with a Finnish waste handler VAPO in Finland to build the first application. A solution pilot is up and running and the outcome of the venture will be defined during 2004.

The Table 10 summarizes the differences between the two Metso ventures and the existing business which were analyzed by the innovation assessment framework presented in the Figures 9 and 10 (assessing novelty and complexity related to market, technology and business model) in a three step scale of low, medium and high.

	Novelty			**Complexity**		
	Market	**Technology**	**Business model**	**Market**	**Technology**	**Business model**
Venture 1	High	Low	High	High	Low	High
Venture 2	High	Low	High	High	Low	High

Table 10 Novelty and complexity related to venture 1 and venture 2.

Assessing the renewal potential and business potential related to ventures 1 and 2 confirm that ventures did differ from the existing business and did have potential to generate corporate renewal. Both were originated as an attempt to find new markets for existing technology. Thus the technological challenges were "easy to understand" in the corporate context, especially because Metso as a company has a "strong faith" in technology. The strong link to existing technology also facilitated the definition of the solution characteristics.

"The process involves new characteristics, but the principles are the same", Project Manager (Venture 1), Metso Paper

The market challenges related to the non-existing industry structure: complex legislation and the lack of "natural" customer.

"The environmental business is not a normal business. The regulations and subsidies make it a difficult area." VP, (Venture 2), Metso Paper

The business model challenges in turn relate to market complexity. As the rules of the market are undefined it is hard to determine who will make money.

"When we talk about environmental issues they need to be translated into monetary terms. Otherwise the message does not get through.", VP, Metso Minerals (Venture 2)

Both venture 1 and venture 2 were tightly linked to the existing business which was seen as an asset. Since the technology development was rooted to that of the existing business, cooperation was easy.

"It is a community in which people discuss. We share our knowledge with others and they share theirs with us." Project Manager, Venture 2, Metso Paper

Since the both Metso ventures were still ongoing it was difficult to assess the final renewal effect related to them (as their exit was not known at the time of the study). The question raised with both of them relates to the high uncertainty of the environmental industry in general. For both ventures the business viability is tied to the complexity of legistlation (EU directives, etc.) which in turn results in market and business model complexity: as the dynamics of the market are not clear it is difficult to find a profitable business model. Thus renewal mechanism in these two ventures seems to relate to learning and knowledge transfer. However, the outcome and final renewal effect related to them are dependent on the overall corporate focus which is being defined. In addition to renewing Metso through cooperation with existing business, if successful they may influence creation of a new division and have a more fundamental renewal effect on Metso.

Other issues regarding venture management brought up in the interviews concerned venture management. For venture 1 ensuring the continuity of the project was a key challenge. Venture 2 took a more pragmatic choice and focused on technology development, namely implementing a pilot plant. It considered resources and management support sufficient and the set time schedules reasonable (no extreme pressure). Cooperation with external parties was seen as an important part of the

development of both ventures: Even though the development of the venture 1 was frozen at the time of the data collection, Metso was seeking a partner to commercialize it with. Venture 2 is being developed in cooperation with VAPO. For venture 1 data about timing and resources was not available.

4.2.6 Relating venturing and corporate renewal

Drawing together the data from Metso the next step is to assess the relation between venturing and corporate renewal. The overall position of venturing in Metso does not seem to follow the framework of strategic corporate venturing in a way that it was illustrated in the Figure 12. Metso Ventures was characterized as a restructuring unit, rather than a unit driving corporate renewal. Yet, Metso had "venture like" development in the mainstream businesses. The Figure 18 illustrates the way Metso's venturing activities fit the framework

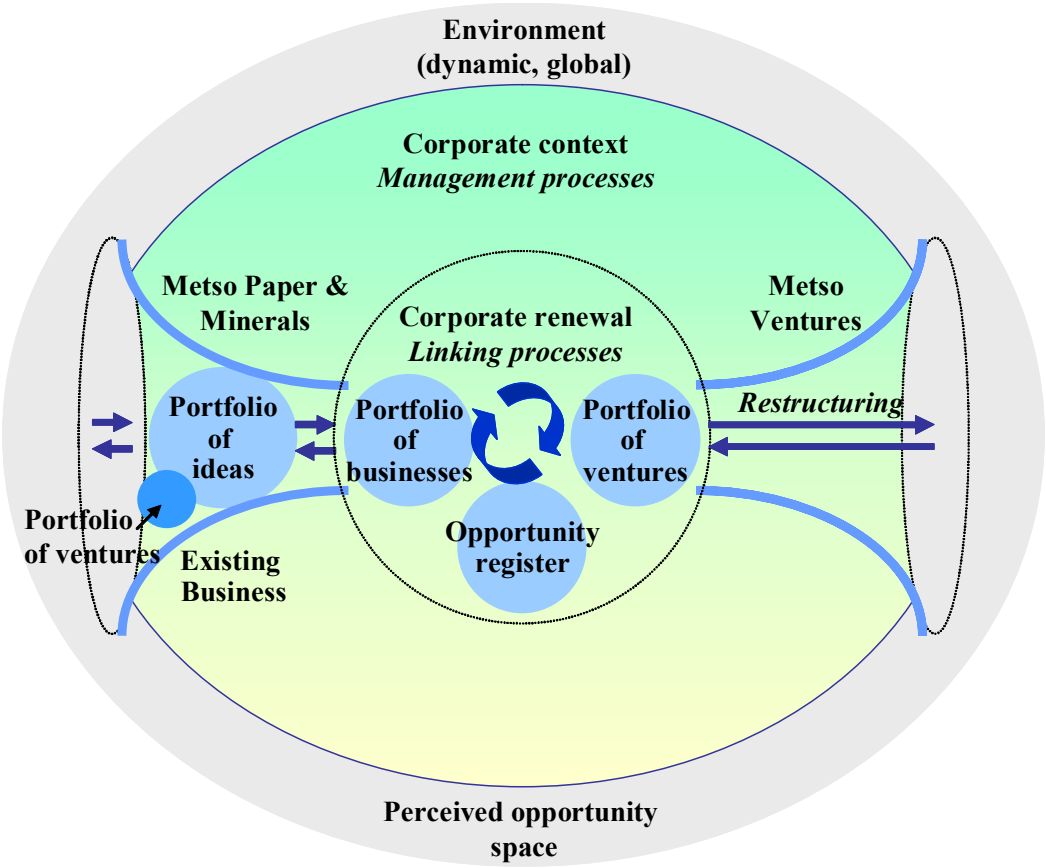

Figure 18 Relation of corporate venturing and corporate renewal in Metso.

As far as the two ventures were concerned to some extent it was possible to analyze the way the processes of continuous corporate renewal took place. The Table 11 illustrates the way these processes were seen to work in venture 1 and venture 2.

	Strategy processes			**Linking processes**		
Venture	**Formulation**	**Implementation**	**Formation**	**Learning**	**Leveraging**	**Nesting**
Venture 1 **Venture 2**	Ongoing	Ongoing	Strategy & Product development	Market Business model	Technology	Opportunity spotting Incubating

Table 11 The processes of continuous corporate renewal in venture 1 and venture 2.

Strategy formulation and implementation concerning these two ventures was seen to be ongoing – they had been established and funded, but as their outcome was still not known the final decision of their future remained to be made. They set the scene for strategy formation to take place. Both ventures deal with more than just product development. In essence through these two ventures Metso is exploring the emerging industry and maps its characteristics and opportunities provided by it. As far as the linking processes are concerned, learning focuses on market and business model. Both ventures leverage existing technology. Nesting in turn is focusing on spotting new opportunities which is enabled by providing these ventures a protected position within the existing business – that is incubating them.

4.3 Nokia

4.3.1 Background

During its existence (1856-2003) Nokia has renewed itself from a multi-industry conglomerate to a world leader in mobile communications. In the 2000s, Nokia has been focusing on improving its operational efficiency, developing its product range and strengthening the globally renowned Nokia brand. The investments in R&D have also been further increased. In 2003 Nokia's turnover was 29 455 MEUR and it employed 51 359 people (www.nokia.com).

Nokia's business objective is to strengthen its position as a leading communication systems and products provider. Its strategic intent, as the trusted brand, is to create

personalized communication technology that enables people to shape their own mobile world. Key items in succeeding are focus on technological innovation for creating applications, devices and services independent of time and place and for achieving interoperability of network environments, terminals and mobile services; capitalizing on Nokia's leadership role in the communications market and continuing to have an active role in the IP convergence market (www.nokia.com / Business Strategy).

Effective January 1, 2004, Nokia reorganized its structure in a move to further align the company's overall structure with its strategy. The new structure includes four business groups (www.nokia.com).

- **Mobile Phones** develops mobile phones for all major standards and customer segments in over 130 countries. It focuses on bringing feature-rich, segmented mobile phones to the global market. At the end of 2003, it represented approximately 80% of Nokia's net sales.
- **Multimedia** brings mobile multimedia to consumers in the form of advanced mobile devices. Its products have features and functionality such as imaging, games, music, media and a range of other attractive content.
- **Networks** is a leading provider of mobile and IP network infrastructure and related services. In 2003, Nokia Networks represented approximately 19% of Nokia's net sales.
- **Enterprise Solutions** targets the enterprise market. The group focuses on business terminals and providing IP network perimeter security, secure content management and mobile connectivity solutions designed to help companies mobilize their workforces while ensuring the security and reliability of their networks.

The new structure also includes three horizontal groups: Customer and Market Operations, Technology Platforms, and Research and Venturing. (www.nokia.com).

- **Nokia Ventures Organization** exists to identify and develop new business ideas outside Nokia's current focus and to contribute to the growth and renewal of its existing core businesses.

4.3.2 Interview structure

Like concluded in the previous chapter, Nokia's corporate venturing unit Nokia Ventures Organization (NVO), by definition, was created to sustain growth and corporate renewal. The interviews were thus started from the venturing organization. The ventures included in this study were identified by the VP responsible of the new growth businesses (internal ventures) within NVO. The six ventures included in this study were chosen to provide examples of different ventures (both successful and terminated) that had different outcomes in terms of their actual organizational position which was linked to the two existing business units Nokia Mobile Phones and Nokia Networks. Since 2003 when the empirical part of this study was carried out Nokia's organization does include four business units: Mobile Phones, Multimedia, Networks and Enterprise Solutions. At the time of the data collection the formulation of Enterprise Solutions had been announced (1.7.2003) but its organization was still being defined. The Figure 19 illustrates the interviewees from Nokia by organizational position and title.

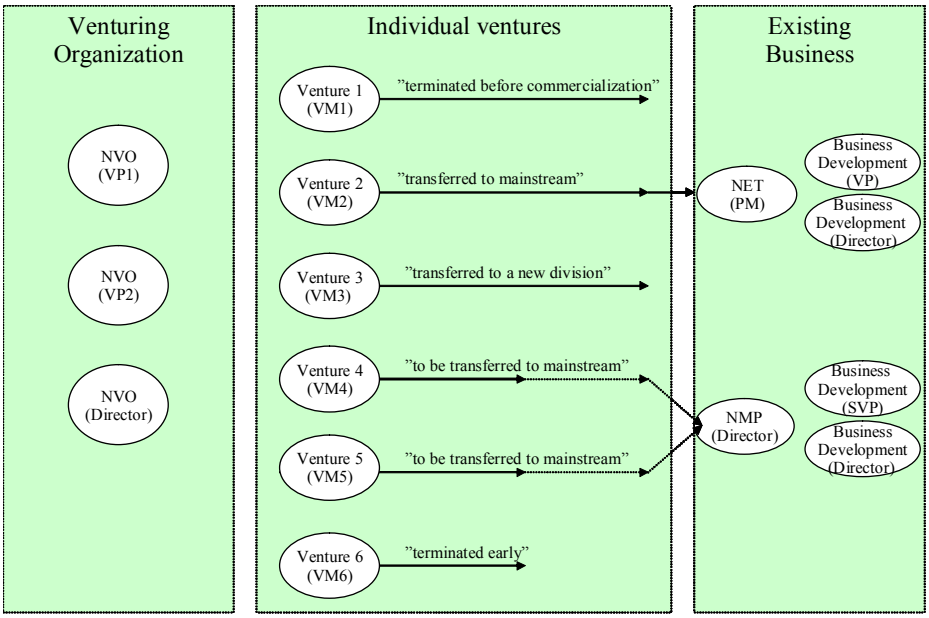

Figure 19 The interviewees from Nokia by title and organizational position.

4.3.3 Determinants of strategy

This chapter deals with the corporate level challenges of Nokia and approaches those challenges by describing the determinants of strategy as they are today and identifying the elements of change related to them.

Nokia competes in the global telecommunications *industry* in general and in the mobile industry in particular (www.nokia.com / Business Environment). The new opportunities relate to industry which is being born around mobile telecommunications and Internet, two industries that grew extremely rapidly during 1990's. In this converging market the challenge is to seek to combine the best parts of standardized (monopolistic) telecommunications industry which has been dominated by large players and non-standardized Internet industry with numerous (small) players. This change challenges Nokia in terms of adopting the organization to slower growth and to less standardized environment in which the key issue is simultaneous flexibility and control. While the new industry is being defined there are a lot of opportunities for new business – for service business in particular.

In terms of *location*, Nokia is a global company: it operates in a global market and its R&D is distributed in a number of countries. Location is important in terms of understanding the customer needs and sourcing technology. In Finland, Nokia is well connected to the Finnish telecommunications cluster and the work done around the "information society".

Nokia's *resources* and *knowledge* base involve developing and implementing complex technologies as well as managing the efficient manufacturing and delivery chain. Current resources are strongly directed to the existing markets and customers. Also there appears to be division between "telco" and "IT" people. Amazing amount of knowledge exists in Nokia. People exchange ideas a lot and it is encouraged. The convergence challenge is about understanding the value of new knowledge. It involves leveraging the existing telecommunications knowledge and realizing that even though Nokia makes a lot of SW its experience and knowledge of the SW business is an area in which new knowledge is needed.

In terms of *structure and culture* of existing business in Nokia this study refers to Mobile Phones and Networks, as the two new business units Enterprise Solutions and Multimedia were only being formed in late 2003. The corporate structure can be characterized as a flat one. Along being open, Nokia's corporate culture is very busy. The recent organizational change (moving from two divisions) can be seen as an attempt to shift focus off from the existing market and implement a cultural change.

As far as *market* is concerned, mobile operators are Nokia's most important customers for both the mobile handsets and networks and they role will remain important.. The enterprise market is new to Nokia. Nokia Mobile Phones' estimated market share of global mobile phone markets was 38% in 2003 and Networks supplied some 30% of global GSM and WCDMA markets (www.nokia.com). In its case the challenge of corporate renewal relates to finding new market opportunities by focusing on end-user acceptance. Customer needs and related market opportunities vary a lot from the "bottom of the pyramid" in developing countries to aging population in industrial countries. Customer needs are however driving all new development and Nokia is actively seeking to understand the customers better.

Technologies used in Nokia's products include standardized technologies for mobile communications and Internet technologies. The technology challenge thus appears moving from standardization driven and monopolistic telecommunications technologies to IT, which have been driven by de-facto standardization and small companies. Even though Nokia looks at technologies for their own right, technology is considered as something that one can influence. Overall, it appears that significance of technology is diminishing.

Nokia's *business model* is product centered. Yet there are attempts to implement a service business model. Changing business model and timing that change is difficult, especially when business model is as efficient as Nokia's has been during the past years. In Nokia the business model challenges relate to the scale and scope. Nokia is capable of doing things in large scale (massive development followed by a wide rollout) and its history as an equipment vendor, moving in services is difficult and perceived "inappropriate" from the customers' (operators) point of view

The Table 12 illustrates the business environment in which Nokia operates and summarizes the key issues related to the determinants of strategy in Nokia as indicated in the Table 8.

Element	Location	Industry	Resources	Knowledge	Structure and culture
Market	Global operations and competitors, global and local customers, opportunity to tap on global sources of knowledge	Telecommunications, emerging IT and multimedia, big companies	Global sales & distribution organization could be better used as a source of market information	Market knowledge is not always timely available, lost in the distribution chain	2 mainstream divisions, 2 emerging divisions, flat structure, open but busy organization
Technology	Regulated. global technology sourcing, distributed technology development	Strong competences in managing complex technologies related to telecommunications, IT emerging	Competing views: traditional telco & emerging IT, difficulties in combining the benefits of both	High level of technological knowledge in core businesses, active search of new technologies	Lack of "slack" and division between traditional telco & new IT complicates adaptation of new technologies
Business model	Building different business models for benefiting from local contexts	Current business model strongly telecommunications orientated, large scale, volume business	Mainstream organization very focused, lack of resources may hamper adaptation of new ideas	Currently very well defined and efficient business model may hamper views of new opportunities (beyond current customers)	Business model strongly related to the mainstream businesses and directed towards mobile operators

Table 12 The determinants of strategy in Nokia

Summarizing from the Table 10, in terms of market Nokia's challenges are in benefiting of its global position and tapping into its existing local knowledge bases. Technologically the greatest challenge is to move out of its comfort zone, from the regulated telecommunications market towards unregulated IT industry. The convergence of these two industries opens up new opportunities but also creates inevitable tension between units, which along different technological capabilities have different cultures that influence the efficiency of knowledge sharing. Nokia's business model has been strongly directed towards mobile operators. As it has proven to be very efficient during past years, identifying what to change and executing that change is difficult. Nokia is however actively executing change – a sign of which is the establishment of the new division

Nokia Enterprise Solutions which focuses on corporate market. Focus on telecommunications has shaped Nokia's structure and culture, and now the challenge is to seek renewal beyond that.

4.3.4 Innovation and corporate venturing

Innovation is important for Nokia. The R&D investment in 2003 accounted for 12% of its net sales (www.nokia.com /financials). Nokia relies in multiple sources of innovation: a lot of ideas emerge spontaneously (bottom-up) but they are also sought by using tools like Nokia Venture Challenge (yearly idea competition), by screening new opportunities in selected areas (insight and foresight driven) and by monitoring external sources. Nokia has implemented different innovation strategies. During the past few years it has acquired a number of companies with interesting new technologies and competencies (20 acquisitions and minority investments during 1997-2003) and been engaged in cooperation in the form of joint ventures (14) and memberships in different cooperation forums (23) (www.nokia.com /history). In addition, Nokia is committed to corporate venturing.

The criteria for assessing innovation are a link to Nokia strategy. The existing businesses focus on and fund projects that relate to existing markets and technologies. Nokia Ventures Organization is working on projects that are further away from the mainstream. Nokia seeks to maximize the leverage of existing competencies by keeping the product development transparent between business units. Market (end-user acceptance), technology and business model are the key criteria for assessing timing and resources commitment related to an idea. Defining what is a venture and what is not depends on other issues as well. Of these timing and resources seem to be the most important – but complexity appears to matter too.

"Venturing is a good way to proceed with ideas that are off from the mainstream business. An idea can be developed as a venture if it forms a clearly separate entity." SVP, Nokia Networks

Nokia's corporate venturing activities are rooted in the need for corporate renewal and fit with existing strategy. Nokia is committed to venturing in the long term. Venturing in

Nokia has however become more focused comparing to the situation in late 1990's when "all flowers were let to bloom". Today's ventures can be characterized as projects that are outside the scope and the focus of the existing business with a target to generate new business and value for the company. Venturing organization is responsible for exploring opportunities for new business and the research center exists for monitoring the development of new technologies. Nokia is engaged in multiple forms of venturing. Strategic venturing involves internal ventures and external ventures funded by Nokia Early Stage Technology Fund (NEST) and Innovent (an internal fund). Nokia has also an external fund (Nokia Venture Partners).

"Starting ventures that do not add value for Nokia would carry high opportunity cost: we could maybe make some money, but simultaneously transfer people and competencies out of the company. We want to do the opposite: create value for Nokia and pull competencies in." VP, Nokia Ventures Organization

Nokia ventures systematically for renewal. It is engaged in purposeful search of new venture ideas in a handful of "opportunity spaces" which involve both technology and business space exploration. Each venture is assessed for its own right and the size of venturing activities is not fixed. The portfolio of ventures is defined by the existence of a strategic link and by the budget or "law of big figures" according to which there cannot be too many big ventures ongoing at the same time. The management criteria are linked to the mode of venturing: internal ventures are more strategic and involve expanding core business (mostly in the context of existing business) and the development of new business. NEST is a strategic option and Innovent as well as the external fund are driven by set targets for ROI.

Nokia manages its internal venturing activities through a dedicated venturing process. It includes four phases that provide guidelines for the size and duration of the project: idea phase (3-9 months), business development (6-12 months), verification (12-18 months) and operation (beyond 18 months). However, as far as the actual product development within ventures is concerned, it is done according to the processes of the receiving BU whenever possible to facilitate the transfer that is when the receiving organization has been identified early enough. As far as expanding Nokia's' existing businesses is concerned the decision making authority is in the business units. For internal and external

ventures decision making is internal to the venturing organization, but it does involve top management as well.

"In practice up to V1 the decisions are made inside NVO. Pekka (Ala-Pietilä) has said that he will use a "veto" if he needs to, but he hasn't needed it so far." VP, Nokia Venturing Organization

Nokia has ensured management attention by organizing venturing (at the time of the study) directly under Pekka Ala-Pietilä. Simultaneous separation and integration is a more difficult task. Attempts to accomplish that include keeping V-1 decision making authority in the Nokia Ventures Organization but involving people from the existing businesses in management boards of the ventures. When the venture exit becomes identified, ventures are advised to start building relations to the receiving unit to avoid NIH (not invented here) syndrome, which is recognized to exist. Keeping the teams small and geographically close (in Finland) in the early stage is seen as a way to facilitate communication and development of the team spirit that drive the venture development.

4.3.5 Venture level issues

This chapter begins with brief discussions of the six Nokia ventures that were included in this study. These descriptions focus on capturing the essence of the ventures and characterizing them in terms of challenges that they encountered.

Venture 3 began as a technology lead venture. Market knowledge was outsourced, and no attention was paid to business model development. After 1.5 years of development a new venture manager was brought onboard to assess the business potential and decide if the venture would have the potential to continue. The conclusion was that business potential was in providing a more complex system (not just the access point). The technological development lead to a stand-by state: the venture was ready to productize the solution if the market and business model challenges were solved. In the end they were not, as a trial did not lead to commercialization. At that point the solution began to be technologically outdated and the venture was terminated. The strong technological competencies gained through the venture were transferred to NMP (only one team member left Nokia). Even today the area (close proximity technologies) which the

venture explored seems to have potential. Thus Nokia keeps monitoring development in that area within the existing business.

Venture 4 aimed at combining the best parts of the services business (customer mindset, customization) and the product business (scalability). The solution uses IT and mobile technologies for providing access to corporate Intranet (email, etc.). The venture was started in NET, but transferred to NRC early on due to changes in the organization. In the beginning the development was technology orientated (prototyping). When more attention needed to be paid to market and business model development and when more resources were needed the venture was transferred to NVO. Commercial launch took place in 2001. Currently the venture is located in NES, a new division formed in summer 2003 with a focus on the corporate market.

Venture 5 originated from the idea to apply scheduled content delivery that existed in IT networks into the mobile environment. The solution enables efficient use of a radio network for transferring selected data during off peak hours (specialized content, given location, affordable price). Before the idea was accepted there was a lot of discussion relating to whether it was too close to the existing business to be a venture. Yet it did not quite fit in the mainstream. During its existence the venture had a well defined challenge: make a presentable solution (prototypes, demo) that can be shown to customers. The venture was transferred to NET where the development of the solution continued. The transfer brought the solution closer to the mainstream as the business model was defined to be that of the existing business. By transferring the entire venture team to its organization NET gained new technological competencies and a working solution.

Venture 6 was created as a response to an emerging fitness and well-being market as an attempt to establish Nokia as a brand in it. The idea was submitted to Nokia Venture Challenge (2002) and the venture was formed soon after that. The product has a strong link to NMP, because in the beginning the solution is tied into an active category phone to be launched in mid-2004. The venture exit will be most likely in NMP (Mobile Enhancement BU). However, if it succeeds in the market in which it is targeting it may be the start of an entirely new business.

Venture 7 aims to building a solution for rapid initiation of location based services. The key elements of the solution are a reader (intelligent battery in the first phase, possibly integrated in the phone later), tags (planted into a location in which the service is originated) and a service database. It was started with an identified market opportunity (discussions with some 30-40 companies) for an existing technology. The solution has a strong link to NMP, because in the beginning the solution is tied into an active category phone to be launched in mid-2004. The venture exit will most likely be into NES, but that has not been defined yet.

Venture 8 was started as a response to an identified market opportunity. Its aim was to generate more traffic in mobile networks and get more TV viewers for "slow" hours by enabling interaction with viewers and program content. During its existence the team investigated the market opportunity by discussing with a limited number of customers, developed three business model ideas and carried out feasibility studies related to them. The venture was terminated in V1 phase because it did not fit the Nokia focus. After the termination the venture manager and two members of the team stayed in Nokia and two members left (those with a radio/TV background).

The Nokia ventures originated as a response to an opportunity related to the existing business or as a result of a purposeful attempt to explore entirely new opportunities. The Table 13 summarizes the differences between the six Nokia ventures and the existing business which were analyzed by the innovation assessment framework presented in the Figures 9 and 10 (assessing novelty and complexity related to market, technology and business model) in a three step scale of low, medium and high.

	Novelty			Complexity		
	Market	**Technology**	**Business model**	**Market**	**Technology**	**Business model**
Venture 3	Medium	Medium	High	High	Low	High
Venture 4	High	Medium	High	Medium	Medium	Medium
Venture 5	Low	Medium	Medium	Medium	High	Medium
Venture 6	High	Medium	High	High	Low	High
Venture 7	Medium	Low	Medium	Medium	Medium	Medium
Venture 8	High	Low	High	Medium	Low	Medium

Table 13 Assessing the renewal potential of the six Nokia ventures

All ventures did involve new technology development and related complexity, but technology itself was not seen as a great challenge.

HW, SW and architecture were challenging, but that kind of complexity was nothing new." Venture manager (venture 3), Nokia

"The technology was new, but it was not a great risk." Venture manager (venture 4), Nokia

For Nokia ventures market novelty and complexity challenged the venture team. The challenges related to measuring a market that did not exist with poor tools (ventures 3,6,8), the difficulty of moving into a new market in general (ventures 4,5,6,7) and resistance from the part of the existing business (ventures 4,5).

"The decision to exit the venture to the existing business closed everything but the operator market." Venture Manager (venture 5), Nokia

"We could bring even more radical solutions to this market if we were established in it." Venture Manager (venture 6), Nokia

Business model was found to be the most difficult dimension. As Nokia's business model has proven to be extremely efficient the ventures found it hard to make changes in it. That was partly because of the resistance from the existing business (ventures 4&5) and partly because of resource limitations (ventures 6&7).

"The business model caused problems because management perceived that it would lead to a conflict with existing customers (mobile operators)", Venture Manager (venture 4), Nokia

"The business model is chosen based on our limited possibilities to differ from the mainstream." Venture Manager (venture 6), Nokia

The Nokia ventures were deliberately chosen to provide information about different outcomes. Venture 3 was terminated before commercialization, venture 4 was transferred to a new division (Nokia Enterprise Solutions), venture 5 to the existing business (Nokia Networks) and venture 8 was terminated in an early phase. Ventures 6&7 were still ongoing but they were planned to be transferred to the existing business (both to Nokia Mobile Phones).

Cooperation with the existing business was important during the venture's life. Ventures did not question the link to the existing business: they considered the existing business as an integral part of their business proposition.

"A small company "out there" has very limited possibilities in this market. It is hard to find partners. But as Nokia we can contact big companies and go directly to their headquarters to negotiate." Venture Manager (Venture 6) Nokia

Links to the existing business did facilitate development by providing an opportunity to leverage existing assets. But simultaneously they made development more complicated. Ventures 3 & 7 found that the development capabilities that Nokia has in managing complex technologies helped them. Ventures 4,5, 6 & 8 started off considering the existing assets. For venture 5 the most important issue was link to existing customers who provided valuable feedback in the solution definition phase. Ventures 4, 6 & 8 built on Nokia's brand and strong position in the mobile telecommunications market. One of the challenges was organizational resistance. For ventures 3 and 5 it related to the way of doing things: from a venture's point of view the existing business' way of working was slow and inefficient. The venture managers felt that they lacked credibility. Venture 4 was perceived as a threat to the relations with existing customers (mobile operators). Venture 5 suffered from the fact that existing business did not consider that anything "real" could be developed by a team that small.

"The resistance was typical for a big organization. From its point of view it is impossible to get anything done with a small team." Venture Manager (Venture 5) Nokia

For ventures 6 & 7 challenges related to limited flexibility in terms of timing – they were bound to a phone program which they could not influence. Both venture managers mentioned lack of resources in the existing business (NMP) as a source of problems in cooperation. In some ventures (5,6 & 7) flexibility was limited because they were bound to use the processes of the existing business. While processes provide needed guidance during development and help to ensure that important issues are taken into account they also add to the venture's workload.

"If we are not ready for type approval when the phone is we might as well stop there. On the other hand delays in the phone program can be as bad – we cannot sell the solution before the phone is launched." Venture Manager (Venture 7), Nokia

Venture 6 found organizational complexity a difficult issue. Due to thin resources of the venture they made a decision to stick to the NMP's delivery channel. But as the solution developed by the venture differs from NMP's current offerings there is a need for extensive internal marketing and training of sales staff – which again is very resource consuming.

"Selling the solution requires a lot of internal marketing at multiple levels. Our challenge is to train NMP and regions to understand the value of our solution." Venture Manager (Venture 6) Nokia

Analysis of the venture outcomes and of their cooperation with existing business, reveal six types of renewal mechanism. In the case of the six Nokia ventures the ability to generate corporate renewal does not appear to be linked to the venture outcome. Even terminated ventures seem to have potential to generate renewal if attention is paid to relocating people and leveraging knowledge underlying creation of new products and services gained in the course of the venture. The six potential renewal mechanisms linked to the six Nokia ventures are listed in the Table 14.

Project	Learning by doing	Knowl. transfer	Relocating personnel	Context transfer	New division	New ideas
Venture 3	A	A	A			
Venture 4	A			A	A	
Venture 5	A	A		A		
Venture 6*	A	A			P	
Venture 7*	A	A			P	
Venture 8	A	A				A

Table 14 The renewal mechanisms of the six Nokia Ventures (A=Actual, P=Planned, *ventures still ongoing).

Learning by doing took place in all Nokia ventures. Venturing was seen as an efficient method to "exit from PowerPoint".

"We would not have learned the true mechanisms of the market and technology if we hadn't actually developed the solution". Venture manager (Venture 3), Nokia

Knowledge transfer from existing business to ventures and from ventures to existing business was intense in most cases. The ventures sought feedback from the existing business which in turn was interested in the development that took place in the ventures.

Venture 3 was terminated before commercialization. Attention was paid to relocating the people in the existing business, thus the knowledge gained during venturing was not lost and the venture did generate corporate renewal through **relocating the personnel**.

Context transfer: The entire venture 4 was transferred from the venturing organization to the mainstream business where it continued in a "venturing mode", as a small team. It helped to renew the existing business by bringing a new way of thinking, new competencies and an efficient way of operating.

"The decision to keep the venture team together was a good one. Had the team been spread around the competencies would have been lost immediately. " Venture manager (Venture 4), Nokia

Venture 5 resulted in a change in corporate strategy by influencing the creation of **a new division**. As such its renewal effect was one of a "successful" venture, if the measurement of success is the ability to create a commercial solution.

"The venture did have some influence on the decision to form NES, because it tried and tested the corporate market." Venture manager (Venture 5), Nokia

Ventures 6 and 7 aim is to create independent new businesses. In the short term they will however be linked to existing business, and their ability to generate renewal is yet to be seen.

Venture 8 was terminated at an early stage. It did involve learning by doing, and knowledge transfer to the existing business. Its effect was however not very significant, as best it could have stimulated thinking and the discovery of **new ideas**.

In addition, the discussions with venture managers involved specific topics related to the ventures. The ventures *established themselves in the corporate context* by linking to the existing business, by demonstrating the strategic value of the solution and by seeking feedback from potential customers.

For venture 5 the market appeared to be strongly linked to that of the existing business. In fact in the beginning it appeared to be "too close" to the existing business to be a venture at all. The relatedness of the market made it easy to seek feedback from potential customers.

"The venture chose a solution that was easy to understand from the mainstream organization's point of view. The fact that the customers were the same as the mainstream's made it easy to see the benefits that the solution provided." Venture Manager (Venture 5) Nokia

Ventures 3,4 & 6 were operating in an environment which "appears to have potential", but where measuring that potential was hard. These ventures were however able to gain support as they were able to demonstrate the strategic value of the new solution. For venture 4 showing the strategic value of the solution remained as a challenge during the entire development process.

"If analyzed analytically, the market looks small – we look beyond what is measurable.", Venture Manager (Venture 6), Nokia

Ventures 5, 7 & 8 were able to establish themselves by developing a description of the potential new product and refining it with its potential customers.

"We have been in contact with 30-40 companies. And the market does not look bad..", Venture Manager (Venture 7), Nokia

Along the venturing process, the key challenges related to the **management of venturing** and cooperation. For venture 4 it was ensuring the continuity of the project, for venture 5 it was technology development. In its case it involved making decisions that would not have been approved by the mainstream. Shifting focus from the "box" to the system level in venture 3 was a key management challenge as it left the developers with very little "real work" to do. Ventures 6 & 7 are both connected to a phone program. Their ability to commercialize depends on their ability to meet a deadline which they cannot influence. In addition to timing or because of it, resources are critical for these ventures. A key management challenge in venture 8 related to decision making: it took too long (2 months) to decide what to do with the 3 feasibility studies the venture had carried out.

"This was a (technology) choice that was made within the venture. We did not tell anybody because NET would not have approved it." Venture Manager (Venture 5) Nokia Ventures Organization

"We have nothing but key resources." Venture Manager, (Venture 7) Nokia Ventures Organization

And sometimes the venturing just felt like fighting windmills. For venture 4 the management support just did not seem to be there. In venture 5's case the venturing organization was not enough to protect the venture and the venture manager felt that the venture transfer to the existing business took place too early.

"At some point of the development I felt that I was alone against the entire Nokia." Venture Manager (Venture 4) Nokia Ventures Organization

"When NET took over I tried to fight it. At that point NVO management supported me." Venture Manager (Venture 5) Nokia Ventures Organization

"They wanted just the solution and the team, not me." Venture Manager (Venture 5) Nokia Ventures Organization

All ventures cooperated with external parties. Some ventures (5,7 & 8) cooperated with potential customers already in the solution definition phase. A pilot project is a good way to test the viability of a solution and it was used or is planned to be used by most of the

ventures (3,4, 5 & 7). Ventures 6 & 7 needed a partner for manufacturing. In venture 6's case the manufacturing challenge was not resolved – and it may effect the outcome of the venture.

"In our case finding a subcontractor has taken a lot f time. The device differs from what Nokia has done before. Thus none of the approved subcontractors have the manufacturing capabilities needed." Venture Manager (Venture 6) Nokia

4.3.6 Relating venturing and corporate renewal

Drawing together the data from Nokia the next step is to assess the relation between venturing and corporate renewal. The overall position of venturing in Nokia seems to fit the framework of strategic corporate venturing. Nokia is venturing to renew itself. It has established the context and management processes to do so. It has also applied the principle of opportunity register: in Nokia the ideas were periodically analyzed to assess right timing as well as seeking opportunities to combine ideas to create something viable. In addition, like Metso Nokia does have some "venture like" development in its existing businesses. The Figure 20 illustrates the way Nokia's venturing activities fit the framework

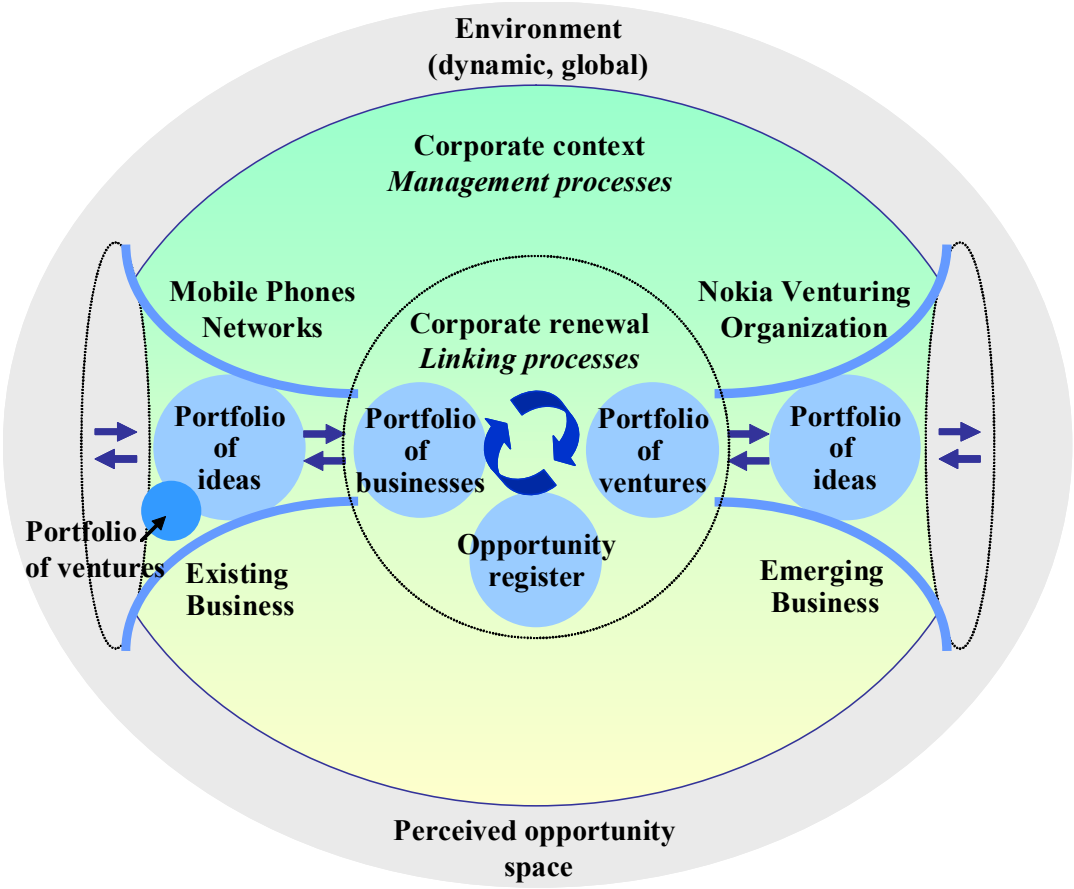

Figure 20 Relation of corporate venturing and corporate renewal in Nokia.

As far as the six ventures were concerned it was possible to analyze the way the processes of continuous corporate renewal took place. The Table 15 describes the way these processes were seen to work in venture 1 and venture 2.

	Strategy processes			Linking processes		
Venture	**Formulation**	**Implementation**	**Formation**	**Learning**	**Leveraging**	**Nesting**
Venture 3	Exit	Competence transfer	Strategy & Product development	Technology Market Business model	Position Deevelopment logic	Opportunity spotting Incubating Continued monitoring
Venture 4	Exit	Context transfer	Strategy & Product development	Technology Market Business model	Position	Opportunity spotting Incubating
Venture 5	Exit	Context transfer	Product development	Technology	Position	Opportunity spotting Incubating Continued protection
Venture 6	Ongoing	Open	Strategy & Product development	Technology Market	Position Deevelopment logic	Opportunity spotting Incubating
Venture 7				Technology Market		
Venture 8	Exit	Partial competence transfer	Feasibility study	Technology Market Business model	Position	Opportunity spotting Incubating

Table 15 Processes of continuous corporate renewal in the six Nokia ventures.

Strategy formulation and *strategy implementation* relate to establishment and outcome of the ventures. For ventures 3, 4, 5 & 8 strategy formulation involved decision to exit and finding a way to integrate the new knowledge to the organization. In the case of venture 3 which was terminated before commercialization implementation of the exit decision involved competence transfer to the existing business by relocating the people. Venture 8 which was terminated early only some of the knowledge was transferred - two (out of five) team members left the company and their competencies left with them. For ventures 4 & 5 the implementation of formulated strategy involved change of organizational context. .They were both transferred as entities, venture 4 influenced creation of a new division and venture 5 continued as a separate entity in the existing business. Strategy formulation regarding ventures 6 & 7 is ongoing.

Strategy formation involved different levels of freedom. Ventures 5 was linked to the existing business and strategy formation within it considered mostly product (or solution) development. Ventures 3, 4, 6 & 7 had more freedom and involved more holistic business

(and strategy) development. Venture 8 was terminated early. It had freedom to explore, but as the feasibility studies did not appear attractive enough it was terminated.

Learning is an essential part of all six Nokia ventures. The key focus areas for learning for ventures 3, 4 and 8 were learning about market, technology and business model. Technology was the main concern for ventures' 5 & 7. The market for venture 5 is that of the existing business (mobile operators) and the decision to exit to NET resulted in applying NET's business model. Even though venture 7's market (enterprises) and business model (service) are not exactly those of "mainstream" Nokia, they are however market and business models whose strategic importance has been formalized by recent organizational change (formation of NES). However, learning in ventures alone is not enough to sustain corporate renewal. The existing businesses need to learn too in order to leverage the new knowledge gained in ventures.

Leveraging existing assets was also an integral part of all six Nokia ventures. All of them considered Nokia's existing position in the mobile market and took it into account when developing the solution. Some ventures (ventures 3, 5 & 7) benefited from the product development experiences of the existing business – as their exit was defined to be in the context of the existing business, they were able to leverage existing development logic. Like learning, leveraging involves the existing business which needs to actively seek opportunities to leverage the knowledge gained during venturing.

This study found four different types of nesting taking place in the six Nokia ventures. Firstly all six ventures were engaged in active monitoring to spot opportunities (*opportunity spotting*). Secondly, venturing as a whole can be seen as a nesting process during which ongoing ventures are provided with support resources and protected from possibly harmful influence (*incubating*). The third form of nesting was found in the case of venture 3 which was terminated before commercialization. However, nesting in the form of *active monitoring* still continues in the context of existing business. Even though the venture was not a commercial success the area which it explored (close proximity technologies) still appears to have potential. The fourth type of nesting can be described as *continued protection* after venture exit. It took place in the venture 5 which was

transferred to the existing business where it continued in a "venture mode". It was protected from being lost in the mainstream organization.

4.4 TeliaSonera

4.4.1 Background

Telia and Sonera, the two companies that form today's TeliaSonera share similar developments paths. Both have a history as state owned pioneers in telecommunications (www.sonera.com / History, www.teliasonera.com / History of Telia). TeliaSonera was born as a result of their merger in December 2002.

Telia and Sonera were leaders in their own home markets of Sweden and Finland. Today TeliaSonera is the leading telecommunications group in the Nordic and Baltic regions. In 2003 TeliaSonera's turnover was 9010 MEUR and it employed about 25 906 people (www.teliasonera.com).

Common strategy and vision for TeliaSonera is being developed. That work rests on three cornerstones: satisfied customers through customer orientation, satisfied employees by active participation in the creation of TeliaSonera and improved profitability through dedicated efforts to realize synergies, increase cost-efficiency, remedy of problem areas and the creation of profitable growth (TeliaSonera Annual Report 2002).

TeliaSonera's vision is to provide simplicity for its customers. It is about making all the communications services work together seamlessly and appear as one system, whether they are mobile, fixed, internet or other solutions. Taken this into account TeliaSonera states that the market for communications services in which they operate is never mature - it is lack of imagination and complexity that has been holding them back. Today they conclude that the market is just emerging (www.teliasonera.com /Vision 2010).

TeliaSonera's organization reflects the origin of the company. It has organized itself around the geographical areas in which it operates (www.teliasonera.com):

- **Sweden:** TeliaSonera is the market leader in fixed and mobile telephony and Internet services (Telia brand).
- **Finland:** TeliaSonera has a strong market leader position in mobile communications and is one of the leading providers of domestic local, long-distance and international fixed-line voice and data services (Sonera brand).
- **Norway, Denmark & Baltic:** In Norway TeliaSonera is the second largest mobile operator (NetCom brand). In addition it has mobile network in Denmark (Telia brand) and holdings in several mobile and fixed telephony operators in the Baltic countries (Lithuania, Latvia and Estonia).
- **International:** TeliaSonera International Carrier is a wholesale provider of network services for fixed and mobile operators, carriers and service providers. In addition its operations include Eurasian subsidiaries and associated companies in Russia and Turkey.

In addition to the geographic profit centers, the TeliaSonera organization includes group wide units as means to secure economies of scale and penetration in the global context.

- **Marketing, products and services** has overall responsibility for the TeliaSonera Group's product and service development.
- **Networks and technology** has overall responsibility for the TeliaSonera Group's telecommunications platforms and IT systems and for purchasing, including contracts with key suppliers.

4.4.2 Interview structure

TeliaSonera was included in this study because it was a different example of venturing in an established company. TeliaSonera's venturing activities as described here are rooted in those of former Sonera that was venturing actively in late 1990's and early 2000, but for various reasons decided to withdraw from venturing. Even though TeliaSonera's current venturing activities are not large scale, it is included to this study because it for its part does enhance the understanding of the strategic linkages between venturing and corporate

context. TeliaSonera's current venturing activities are run under CTO's office. The data collection from TeliaSonera was started by interviewing VP of Corporate Renewal who indicated the Focus Area Directors (FAD) as the key sources of information in relation to corporate renewal. However, only two out of four FADs were available to be interviewed in the given timeframe. Venturing in today's TeliaSonera linked to strategic asset management, and the director of that area was interviewed to provide information about the current modes of venturing. The Figure 21 illustrates the interviewees from TeliaSonera by title and organizational position.

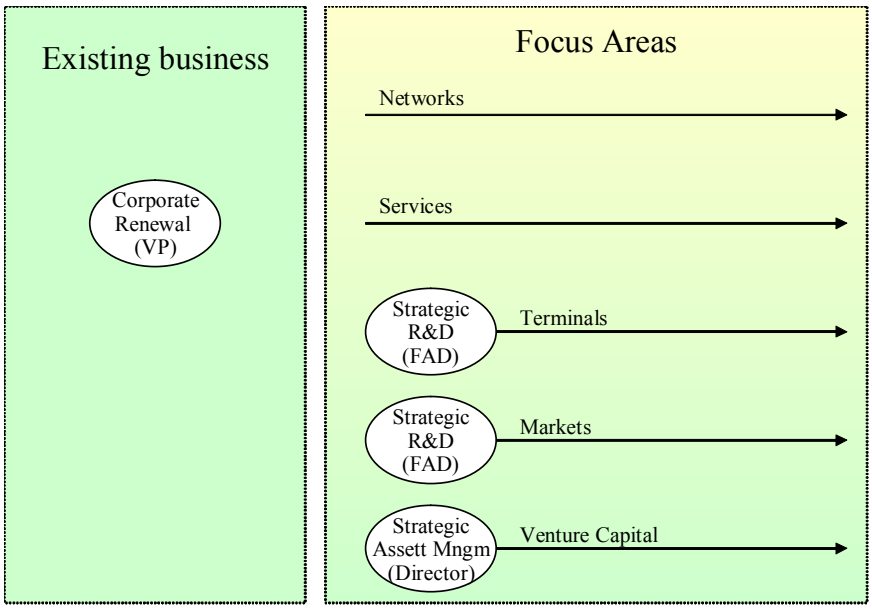

Figure 21 The interviewees from TeliaSonera by title and organizational position.

4.4.3 Corporate level issues

This chapter deals with TeliaSonera's corporate level challenges and approaches them by describing the determinants of strategy as they are today and identifying the elements of change related to them.

Like Nokia, TeliaSonera operates in the telecommunications *industry* which was characterized as an industry involving high degree of standardization and large companies. TeliaSonera offers customer services within mobile communications, Internet, data communications and fixed telephony (TeliaSonera's Annual Report 2002).

Its business environment is defined by regulators, stock holders, personnel and customers. The telecommunications industry has grown rapidly but now the growth has slowed down challenging companies in terms of convergence and related new service creation around mobile telecommunications and the Internet. In its industry TeliaSonera's role is in integration, not in content or technology. It is working around themes related to the Information Society (one of the key research areas funded by the European Community, see Castells & Himanen, 2002) and seeking to develop new services around that theme.

TeliaSonera is in service business, which makes *location* very important for it. TeliaSonera's country organizations in Finland and Sweden are very strong since the roots of the company are in these two countries.

As far as *resources* and *knowledge* are concerned, TeliaSonera is very good at integrating complex solutions which has enabled it to be among the first to deploy new solutions and launch innovative new services. It is however seeking to be a service innovator and just a "smart buyer" in terms of technology. That seems to demand less focus on technological innovation and more focus on through understanding of the customer needs. The related need for cooperation is based on a need for more efficient use of development resources and the need to maximize "return on knowledge assets".

TeliaSonera's *structure and culture* are determined by the two national organizations that are seeking a common corporate identity. The current organization with division into profit centers (national organizations) enables TeliaSonera to approach different markets differently. Cooperation with different organizational groups is active and knowledge sharing is encouraged. However, there are cultural differences between different corporate functions: networks & technologies and markets & products and "silo thinking" related to functional structure do exist. The cultural challenge is to build on strengths of the Swedish and Finnish corporate cultures as well as capitalizing on opportunities for synergy. The challenge of joining two national organizations demands taking the different organizational group's opinions into account and creating common values around them. In terms of corporate culture the biggest differences appear to be the speed

of making decisions. By the Finnish interviewees the Swedish (Telia) corporate culture appeared to be hierarchic and bureaucratic and the Finnish (Sonera) culture was seen as more innovative and flexible. In addition to its home countries TeliaSonera seeks to leverage learning from its other areas e.g. Norway in which it is in a challenger role. It is trying to find positive examples to establish a service innovator culture which enables combining technologies into profitable business models that meet the underlying end-user needs.

TeliaSonera is a *market* leader in its home markets Sweden and Finland. In Sweden (population 7.5 million) it has 3.8 million mobile subscribers, 6.3 million fixed telephony subscribers and 1.2 million Internet access customers. In Finland (population 5.5 million) it has 2.4 million mobile subscribers (www.teliasonera.com). TeliaSonera seeks to leverage its existing markets and develop through understanding of customer needs. It has traditionally divided the market into tree segments: consumers, SMEs and large corporations. Today, they are mapping basic needs, the needs that are more stable across all segments. Their aim is to develop deep understanding of the market for realizing its full potential and distributing that understanding throughout the organization. In the future all development carried out in TeliaSonera should be based on "decoding" market complexity. This work relates to research around the Information Society and involves creating a systematic approach for understanding the basic needs to communicate.

From *technology* point of view TeliaSonera is strong in both telecommunications and IT. It operates GSM and WCDMA networks, fixed telephony and broadband IT networks. However, TeliaSonera seeks to reduce the importance of new technologies and develop internally just the pieces of technology that are not available from the market. Its aim is to be a "smart buyer" rather than a technology innovator. Yet it does see the need to invest in development and standardization of strategic technologies. The need for technology outsourcing relates to the tidal wave of technologies, in relation to which interest is not in technologies themselves but in understanding how they can be used to build applications. Organizationally novelty, namely technological novelty has been valued in TeliaSonera. Now, when the focus is shifting to market and business model, the challenge is to transfer organization into leveraging "old" technologies.

TeliaSonera's *business model* is service centered. However today, it seeks to cooperate more – but successful cooperation involves finding a business model that enables all parties to benefit. It is seen as a "greatest challenge" because an applicability of a business model relates to an organization's ability to deploy it.

The Table 16 illustrates the business environment in which TeliaSonera operates and summarizes the key issues related to the determinants of strategy in TeliaSonera's case as indicated in the Table 8.

Element	**Location**	**Industry**	**Resources**	**Knowledge**	**Structure and culture**
Market	Adapting services to local markets	Telecommunications, IT	Shifting focus from technology development to through understanding of the market	Gaining intimate knowledge of underlying customer needs; "decoding market complexity"	Drawing together the best of Finnish and Swedish heritage, leveraging learning from other markets as examples
Technology	Global monitoring of potential sources of technology	Strong competencies in implementing complex technologies, convergence of telecommunications and IT industries	Focus on the development of strategic technologies	Focusing on technologies that add value for the end-user; "smart buyer" mentality	Creating a service innovator culture which enables combining technologies into profitable business models
Business model	Understanding the local conditions and learning from them	Finding business models that enable benefiting from the convergence	Less technology and more business development	Focus on the market and business model and then technology	Structuring for cooperation and finding a profitable business model

Table 16 Determinants of strategy in TeliaSonera

Summarizing from the Table 16, the renewal challenge for TeliaSonera relates to capitalizing on opportunities created by the convergence of the telecommunications and IT industries. Its after merger strategy seems to be quite low risk with a focus on establishing an organizational culture – and preferably one that values innovation. Of the three components of innovation TeliaSonera seeks to focus less on technology and more on adding value for the end-user, that is understanding the market and developing profitable business models based on that understanding.

4.4.4 Innovation and venturing

Sonera was well-known for its innovativeness, it was among the first to launch new services. Today, there are less projects and the focus is on new service applications which sustain growth and creation of new business. Innovation in today's TeliaSonera is more about "right" timing than being the first to market. Overall, its innovation challenge is to translate customer needs into technological requirements and to find right partners to develop the solutions with.

As far as assessing innovation is concerned, timing makes a difference in choosing the organizational context in TeliaSonera. It operates within three time horizons: short term activities can be described as commercialization and medium term activities as productization. They concern mostly country organizations while long term activities are tackled in the corporate level. Projects can be started easily control comes into the picture when more resources are needed.

TeliaSonera (Sonera)'s current venturing can be described as "venturing without an investment" where the focus is maintaining the network. It is rooted in Sonera's venturing activities which were driven by a strategic need for corporate renewal. These included an internal venturing unit and external ventures with a focus on learning about venture capital operations and related opportunities for outsourcing. Instead of financial investments TeliaSonera is dedicating time to manage the relationship with venture capital companies and innovative start-ups.

Venturing in Sonera was carried out in a separate organization, New Communications Services, which employed some 200 people. It was driven by a strategic need for corporate renewal and organized separately to build ability for risk taking and to develop a culture of its own. In addition Sonera was involved in external ventures with a focus of learning about venture capital operations and related opportunities for outsourcing.

Sonera terminated its venturing operations in 2001. The reasons related to bursting of the IT bubble and tightening financial situation. The failure to benefit from venturing related to the high level of hype and nature of the solutions. The point solutions developed by the

ventures were not applicable in the larger context. Thus, if analyzed by the number of implemented ideas the track-record of venturing was not good. However they might have had value in stimulating thinking, finding new ideas and monitoring external trends.

4.4.5 Relating venturing and corporate renewal

Drawing together the data from TeliaSonera the next step is to assess the relation between venturing and corporate renewal. It looks like TeliaSonera's former venturing activities (its New Communications Services) did fit the framework – but it appears that they failed to establish the link between venturing and corporate renewal. That may have been one of the reasons for not achieving the desired effect and in turn a factor influencing the decision to terminate the venturing unit. The today's venturing activities can be described as focused networking. The Figure 22 illustrates the way TeliaSonera's venturing activities fit the framework.

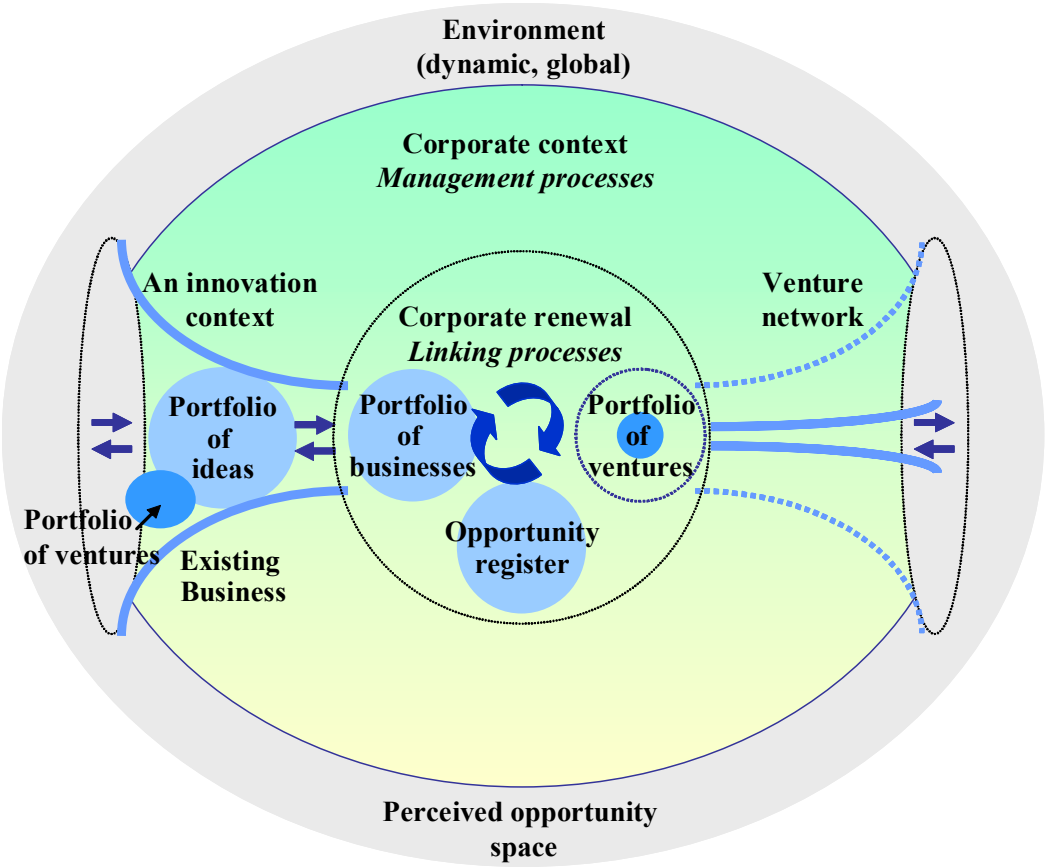

Figure 22 Relation of corporate venturing and corporate renewal in TeliaSonera.

As this study did not include any ventures from TeliaSonera, it is not possible to assess the processes of continuous corporate renewal more specifically. As far as the overall context was concerned formulation and implementation did take place through the decisions to engage in venturing in the first place and then exit from it. It seems however that the strategy formation challenge was too vaguely specified. Thus it appears that too much freedom lead to unintended consequences that were too risky and too far from the scope of the existing business.

5 Discussion

This chapter summarizes both the theoretical and practical propositions of this study and evaluates how it succeeded in achieving its purpose – in enhancing our understanding of the mechanisms through which corporate venturing and corporate renewal are linked.

5.1 Introduction

This study observed an established company operating in a dynamic and global environment. Its origin was in the paradox that companies do engage in corporate venturing as an attempt to seek corporate renewal – but seem to have difficulties in capturing the desired effect.

This study proceeded through a large volume of literature to establish a solid basis for understanding the two key concepts corporate renewal and corporate venturing to accomplish the purpose of this study. There are three key insights that emerge from this study. The first two relate to understanding a company's position in its dynamic and global environment. Illustrating these insights in the Figure 23, help to understand the links between different frameworks proposed by this study. The first framework involved defining the determinants of strategy.

Insight 1: Determinants of strategy influence a company's choice of innovation strategy.

This study defined innovation as a *source of corporate renewal*. It found four generic strategies for innovation: innovation in the context of existing business, mergers and acquisitions, strategic alliances as well as corporate venturing. In order to choose an optimal context for development this study suggested a framework for assessing innovation.

Insight 2: The choice of innovation strategy is dependent on the type and dimensions of innovation.

Along the study process the third key insight arose. It related to the fact that in a dynamic and global environment corporate renewal is not a single act, it is indeed continuous. Thus the third insight concerned the key construct of this study: the framework of strategic corporate venturing.

Insight 3: Strategy processes and linking processes are the mechanism through which continuous corporate renewal takes place.

The Figure 23 illustrates the sequence of the frameworks presented in this study. It suggests that capturing the desired renewal effect of corporate venturing is rooted in the determinants of strategy that in turn should influence the choice of innovation strategy. Yet, this study suggests that the renewal effects remain ineffective if considered as a single act – and thus highlights the importance of establishing linking mechanisms between different innovation contexts, which in this study were the context of existing business and the context of corporate venturing.

This chapter explains in more detail the theoretical and practical propositions that arise from this study.

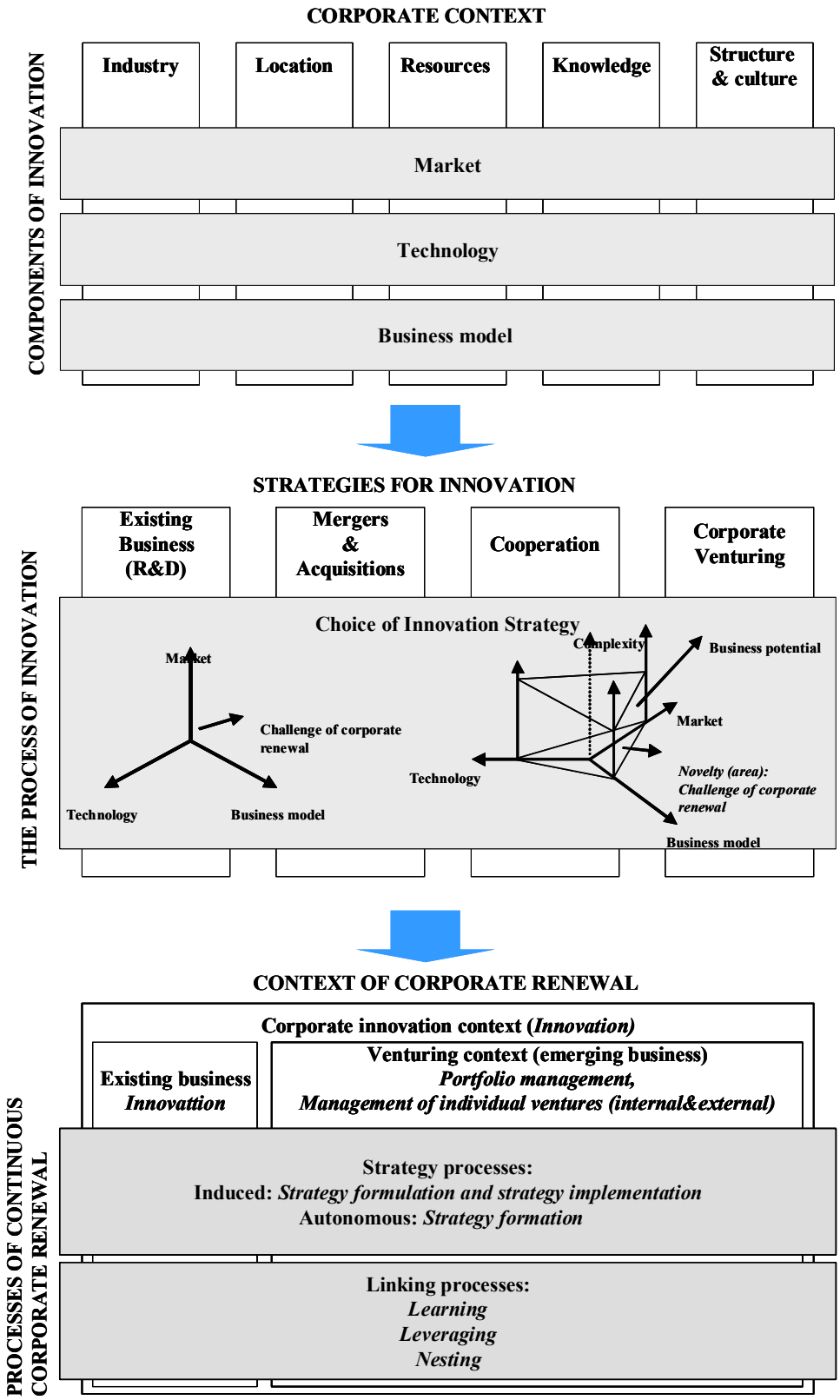

Figure 23 The linkages between different frameworks of the study.

5.2 The propositions of the study

5.2.1 Theoretical propositions

This study's key theoretical construct, the framework of strategic corporate venturing, binds together existing theories of strategy, corporate renewal, innovation and corporate venturing in a cohesive whole. It contributes to the existing theories by extending the understanding of the need for and the processes of continuous corporate renewal, and the mechanism needed to link corporate renewal to corporate venturing. Furthermore, this study proposed a framework for assessing innovation which is an essential part for estimating the renewal potential of a given innovation.

The first theoretical proposition of this study highlights the importance of strategy and directs the attention to the factors that define the basis of competitive advantage.

Corporate renewal is a part of corporate strategy but not the essence of it. Characterizing the environment by assessing the determinants of strategy is the key in adjusting the speed and magnitude of change.

Strategy underlies all elements of the framework. Determinants of strategy involve the existing corporate context and markets, technologies and business models applied by the company. Strategy is the basis on which a company's ability for corporate renewal is built. In order to sustain corporate renewal through corporate venturing the venturing activities need to be linked to corporate strategy.

The second theoretical proposition concludes that in today's dynamic and global business environment corporate renewal in the form of "change programs" is not enough. Instead corporate renewal needs to be continuous.

This study proposes institutionalizing corporate renewal in the strategy processes of a company and identifies these processes as strategy formulation, strategy implementation and strategy formation.

Even though the processes of strategy formulation and implementation have been thoroughly studied and the existence of autonomous strategic behavior (strategy formation) has been recognized by several authors (Burgelman, 1983a, 1983b, 1984, 1988, 1994, Mintzberg, 1987a, 1987b) this study enhances the understanding of these processes by describing them as *means to respond to the need to institutionalize change*. The identification of the strategy processes of a company as the *mechanisms* through which corporate renewal takes place extends the understanding of how continuous corporate renewal can be achieved.

The third theoretical proposition of this study involves the determinants of strategy and highlights the importance of understanding the corporate (innovation) context and the processes through which it is managed.

The framework of strategic corporate venturing proposed by this study is a new way to *illustrate* the role of corporate venturing as a *purposefully built, different view* of a company's business environment. Its proposed value is in identifying the key elements of the corporate (innovation) context and the management processes.

Different views of the environment are needed to sustain renewal. A company interacts with its environment in multiple levels. The corporate level view of the environment involves elements of all existing businesses whose view of the environment is determined by their past. The value of corporate venturing is to provide a purposefully different view of the environment.

The fourth theoretical proposition relates to distinguishing between the corporate context and management processes which focuses attention to the need for linking processes as intermediators between them. The corporate context was seen to consist of industry, location, resources, knowledge and structure and culture, and together with market, technology and business model act as the determinants of strategy. The management processes involve strategy processes which define the essence of the company: the businesses it is involved in and the way it is involved in them. They set the guidelines for processes of innovation and corporate venturing that are concerned with managing the

contexts related to them. Of the three linking processes identified in this study, the importance of learning and leveraging have been recognized in the context of corporate venturing (Tidd & Taurins, 1999). This study emphasizes the importance of *nesting* as a key process needed to manage timing and thus extends the existing theory about management of corporate venturing.

This study suggests that without efficient linking between different contexts and management processes the renewal effects will remain ineffective. It identifies learning, leveraging and nesting as the linking processes needed to sustain continuous corporate renewal.

Without effective linking processes a company's attempts to sustain corporate renewal remain ineffective: existing businesses do not benefit from new knowledge gained through venturing, ventures do not learn how to apply existing knowledge and resources, and if timing is not right even otherwise viable innovations may fail.

The fifth theoretical proposition relates to the importance of assessing innovation. The innovation assessment framework proposed in this study assesses market, technology and business model along related novelty and complexity. It is a versatile theoretical concept. It recognizes that business model is as important a component of innovation as the traditionally analyzed market and technology. It also brings a new dimension to assessing innovation by recognizing the value of analyzing complexity and not just novelty related to each component. Its theoretical value is in joining these in a way which helps to assess not only the *renewal potential* but also the *business potential* related to an innovation and using this assessment to define an optimal organizational position for developing it.

This study proposes assessing innovation along novelty and complexity of market, technology and business model to determine its renewal potential and business potential and for choosing an optimal context for developing it.

Assessing innovation based on the determinants of strategy and taking into account the dimensions of innovation (novelty and complexity) underlies the ability for corporate

renewal by enabling companies to find innovations that have both renewal and business potential and to choose an appropriate context in which to develop them.

5.2.2 Practical propositions

The three case companies helped to extend the understanding of the issues related to the framework of strategic corporate venturing significantly. The practical propositions presented in this study summarize the key findings of the three case companies: Metso, Nokia and TeliaSonera. The practical propositions relate to the assessment of determinants of strategy as a starting point for determining their competitive landscape and positioning venturing in it, enhancing our understanding of the link between corporate venturing and corporate renewal and finally observing the processes of corporate renewal in the eight ventures that were analyzed as a part of this study. The

The first practical proposition links to the *importance of relating the renewal efforts to overall corporate strategy* which was carried out by analyzing the determinants of strategy in the case companies. The corporate level analysis revealed that even though the three companies operated in different industries, the renewal challenges that they faced were somewhat similar. All valued technology, but emphasized a thorough understanding of the market. The importance of business model was recognized but it was found to be the most difficult dimension: Nokia's challenge was seen to relate to the need to be less operator-centered, Metso's challenge was to move to service provision and for TeliaSonera the challenge related to the need to cooperate more while building its competencies as a service innovator.

Characterizing a company's environment with the eight determinants of strategy identified in this study provided a structured way to analyze their competitive position and renewal challenges that they are facing – and proved valuable in describing the corporate (innovation) context.

The second practical proposition considers the *link between venturing and corporate renewal.* Assessing the role of venturing in relation to the determinants of strategy and

the challenge of corporate renewal this study revealed that in Nokia the venturing activities were linked to the key renewal challenges – understanding different markets and finding new business models. For Metso, its venturing division was seen as a restructuring unit, and thus was not linked to its key renewal challenge becoming a service provider. Also venturing in the existing businesses seems more like an add-on, more like a truly renewal orientated development. However, a "venturing" approach could be valuable for Metso in its attempt to become more service orientated – that would be something to consider when defining the role of its venturing unit. Sonera's venturing strategy before its merger with Telia seems to fit its desire to renew itself – but was without doubt a high risk one. The financial challenges resulting partly from the failure of venture related investments may have been one of the factors underlying Sonera's merger with Telia – and as such an unintended "jump start" in a series of action which is indeed renewing the two companies. Today TeliaSonera's venturing is very different from what it was in the late 1990's and early 2000's. It is strategic, organizationally embedded and above all focused on its core activities.

This study concludes that corporate venturing is indeed linked to corporate renewal, but found out that the link may not be as straight forward as indicated - the intended renewal efforts may have unintended consequences.

The third and fourth empirical proposition link to the original paradox: Companies do engage in venturing to renew themselves, but seem to have difficulties in capturing the desired renewal effect. It directs the attention to the elements of the framework of strategic corporate venturing: the context, the management processes and the linking processes. The first empirical proposition focused on the context and used determinants of strategy to define the renewal challenge. The third empirical proposition enhances our understanding of *the importance of management processes*. The theory suggested that continuous corporate renewal needs to be embedded in the strategy processes of a company and identified these processes as strategy formulation, strategy implementation and strategy formation. The analysis of these processes in the eight ventures included in

this study unveiled the sequence in which the strategy processes work which is illustrated in the Figure 24.

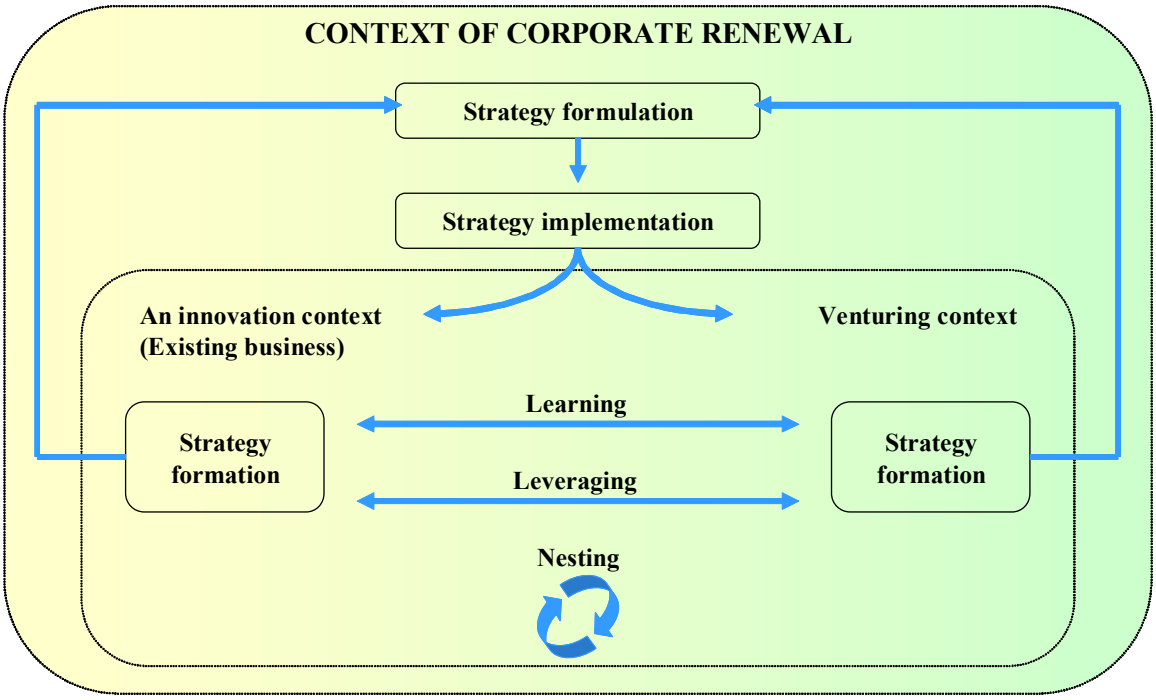

Figure 24 The venturing processes at work in the corporate context.

The processes of continuous corporate renewal work sequentially. The induced strategy processes strategy formulation and strategy implementation set the scene for corporate venturing context and management processes and leave strategy formation for the venture. The strategies formed by ventures (and by other innovation strategies for their part) then come back to the corporate level – and if viable in the corporate scale formalized through formulation and implementation.

The fourth empirical proposition highlights *the need to establish efficient linking processes*. They need to work efficiently in both directions: learning needs to take place in the venturing context to generate new knowledge and leverage existing assets and then in the context of the existing business in order to leverage the new knowledge generated in venturing. This study identified four types of nesting: opportunity spotting, incubating, continued monitoring and continued protection. To be efficient the linking processes need

to work during venturing – and for their part renew the company in short and medium terms.

The analysis of the eight ventures suggest that establishing efficient linking processes is the key in benefiting from corporate venturing as a source of corporate renewal. The linking processes are at work during venturing and for their part ensure continuous corporate renewal.

The fifth practical proposition concerns the applicability of the innovation assessment framework. This study suggested analyzing novelty and complexity of market, technology and business model to assess the renewal potential and business potential of a given innovation. These factors were indeed found important – but business model was found to be a much more difficult dimension than market and technology.

Companies considered market and technology important in assessing innovation. Business model was found important but difficult to change.

5.2.3 Summary of the propositions

The Figure 25 summarizes the propositions of this study: five theoretical and five practical.

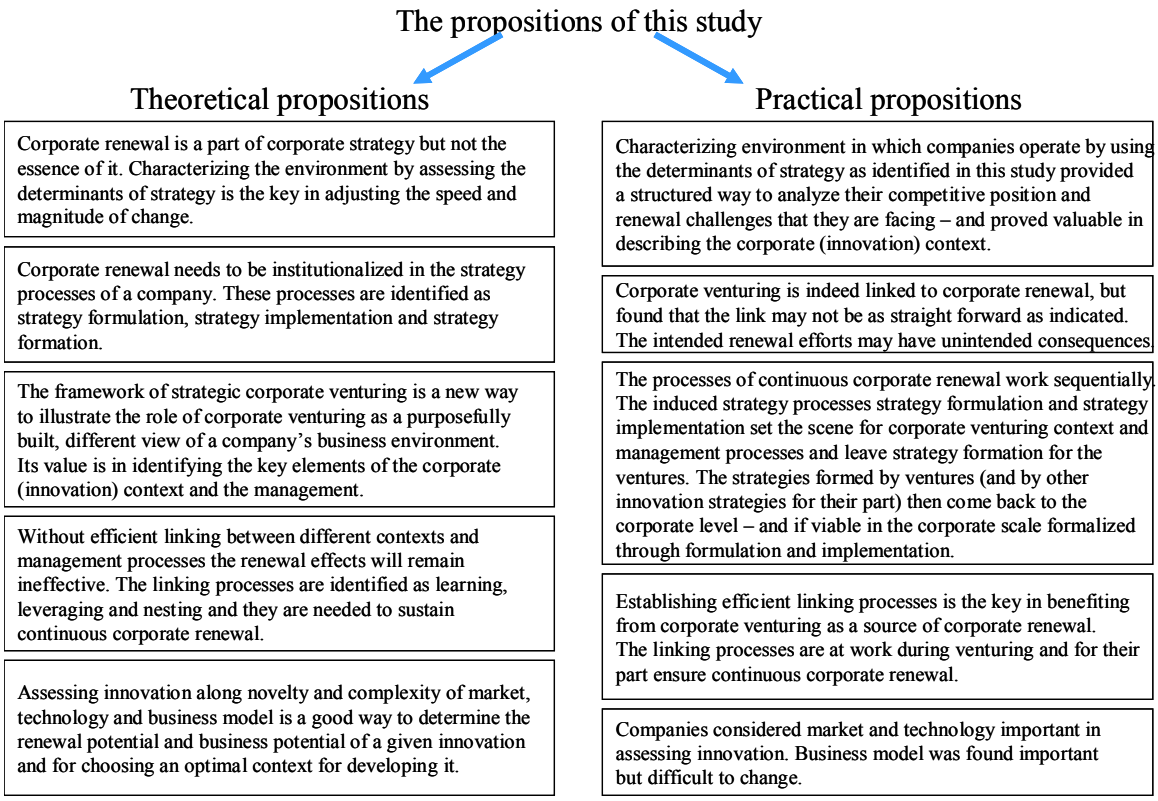

Figure 25 The propositions of this study

Building on the propositions this study suggests using venturing as a strategic tool to explore new industries or help companies to better tap to local pockets of knowledge. Especially in Metso's case, service development projects could be used to explore opportunities for service development. Resourcing is also an issue to be considered. Freedom to recruit from outside of the company was found to be an efficient way to bring in new people that would not have been interested in joining the existing businesses. Providing the ventures with some slack resources and using them as recruiting tools to pull new competencies might help companies to maximize the benefits from their venturing activities. Structure and culture were found to be hard to change. But it is possible to use venturing as a catalyst of change. The example of venture 4 showed that persistence combined with a viable new business opportunity can help to initiate change in the corporate structure despite the resistance it encountered from the part of the existing business. Ventures had the freedom to explore markets new to the company. Due

to resource limitations and the fact that they needed to dedicate a significant amount of time to internal marketing they considered that their ability to influence the market was limited. Technology seemed to be the easiest part, and business model the most difficult. In some cases it appeared that the fact that business model was taken as given was limiting a venture's ability to generate corporate renewal. Thus this study's findings may benefit the companies in distinguishing between the elements of innovation that need to be taken into account and balancing the development efforts related to all three elements of innovation: market, technology and business model. As shown in the case of venture 3, technology development without viable analysis of the market and business model did not lead to a commercially viable solution.

5.3 Evaluation of the research

The evaluation of this study begins by a short assessment of the theoretical traditions of strategy research which were discussed in the beginning of the theoretical part.

This study concludes that transaction cost theory and agency theory have a limited capability to explain the role of corporate venturing in sustaining corporate renewal, due to their static nature. Contrary to the transaction cost arguments, in highly uncertain situations (i.e. emergent markets, innovative technologies) firms seek rather than avoid alliances (Eisenhardt & Schoonhoven, 1996). Also Tidd (2001) concludes that networks are appropriate where the benefits of co-specialization, sharing of joint infrastructure and standards and other network externalities outweigh the costs of network governance and maintenance. Similarly, the researcher is not convinced of the applicability of the resource based view due to the dynamic nature of today's competitive environment. While resources are an important determinant of success, dynamic conditions may leave the current resources obsolete if the company is not able to respond to change. As Shrader & Simon (1997) concluded, resources alone do not guarantee success.

Rather than transaction costs or resources, this study highlights the role of knowledge as an increasingly important determinant of success (Bartlett & Ghoshal, 1995, Larson, 2001). As concluded in this study, the corporate venturing process is about learning, accumulating knowledge about new markets, technologies and business models.

However, the process of learning needs to be complemented by the process of leveraging, that is applying knowledge and enabling the development of new competitive advantages. Another interesting view is the dynamic capability view (Teece & Pisano, 1994) which emphasizes two aspects: a dynamic environment and the management ability to adopt, integrate, and reconfigure internal and external organizational skills, resources and functional competencies towards the changing environment. With growing complexity, the focus shifts from competencies based on internal assets such as R&D activities and intellectual property to the position of a firm within an innovation network and competencies based on its relationship with other organizations (Tidd, 1997).

This study concludes that dynamic capability view and knowledge based view appear most promising in describing the role of corporate venturing in sustaining corporate renewal. The changing environment calls for a dynamic approach to strategy and focuses attention on building the ability for continuous corporate renewal. The framework of strategic corporate venturing takes into account the fact that knowledge is context dependent and highlights the importance of differentiating between the partially overlapping corporate, innovation and corporate venturing contexts. It also focuses on describing the processes of continuous corporate renewal: the strategy processes of a company and the linking processes needed to intermediate between the different contexts and management processes which by definition can be seen as dynamic capabilities.

The second issue to be evaluated involves the validity and reliability of this study and applicability of the results.

The literature on which the framework of strategic corporate venturing is based includes a large volume of recent studies about strategy, corporate renewal, innovation and corporate venturing. Thus the theoretical basis on which it is built is solid.

The empirical part was qualitative of nature. It explored areas defined by the theoretical framework in three companies that had been or were involved in venturing. Three companies do not provide an all-encompassing picture of the relation between corporate renewal and corporate venturing, but the data did help to extend the understanding of the issues related to the framework and to describe the topic of the study in more detail.

The applicability of the framework of strategic corporate venturing is thus good. It can be used to help established companies to identify the key issues needed to achieve corporate renewal through corporate venturing in the short, medium and long terms and thus better justify investment in corporate venturing. It does not however provide a simple yes or no answer to the question "does venturing pay off?" or "should companies engage in venturing in the first place?" It does however provide tools for analyzing the competitive environment to pin-point the renewal challenge, define the venturing context and management processes needed to use venturing as a source of corporate renewal and help to define what is needed to improve the odds of harvesting the desired renewal effect.

5.4 Ideas for future research

The scope of this study was holistic: it observed an established company operating in a dynamic and global environment. The holistic nature of the theoretical framework made it difficult to verify. The theoretical part of this study was of explorative nature and thus does leave room for future research for finding stronger evidence to support its the propositions.

The first research direction relates to external venturing. The theory development involved different forms of venturing, but the empirical part was limited to mostly internal venturing due practical limitations. Thus while the theory included both internal and external venturing, the empirical part however was involved mainly with internal venturing. An interesting direction for the future would be to observe external venturing and see if it fits the framework.

The second area of interest links to different innovation strategies as a source of corporate renewal. This study identified innovation as a source of corporate renewal, and corporate venturing as an innovation strategy. In addition it recognized that other innovation strategies, namely mergers and acquisitions and cooperation have the potential to sustain corporate renewal. Hence, interesting directions for future research include replacing corporate venturing in the framework by these other innovation strategies and exploring their role in sustaining corporate renewal in a similar way to this study.

The third possible research direction links to developing the propositions of this study further by applying more quantitative research strategy. As this study was qualitative in nature and aimed at *enhancing our understanding* of the relation between corporate renewal and corporate venturing there is plenty of room for more specific research in trying to quantify the importance of each component of the framework of strategic corporate venturing.

The fourth research direction relates to the innovation assessment framework. This study assessed innovation by dividing it into three components (market, technology and business model) and two dimensions (novelty and complexity). It is a versatile concept which can be applied at multiple levels: industry, company, business, innovation etc. Developing it further by exploring the dimensions of innovation and finding more detailed measures for each component and dimension could help to extend its applicability. It could be useful for example for mapping opportunities for open innovation and cooperation.

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