The Distinct Characteristics and Strategic Impact of Emergent Projects in Large Organizations

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Executive Summary

Despite the many researches made on emergent strategies and project portfolio management, one can hardly find studies on the link between them. It can easily be assumed that emergent strategies and market dynamics have considerable effect on the portfolio of projects in organizations and, supposedly, give rise to emergent projects. We defined emergent projects to be untypical or irregular projects for the organization which are at the borderline or even outside the mainstream of the current portfolio of projects. These types of projects impact the company’s strategy with the aim to increase the organizations competitiveness. This study will try to find out the possible distinct characteristics and strategic impact of emergent projects on large organizations so that these kinds of projects can be properly recognized for what they really are and managed effectively.

We used a semi-structured interview method to collect data from six international companies in four countries. The countries are Germany, Switzerland, Sweden, and Taiwan. Using template analysis method, we analyzed the collected data. The analysis confirmed our assumption that there is a correlation between emergent strategies and project portfolio management. Moreover, we found out some of the characteristics and strategic impacts of emergent projects. The results of the study, therefore, shows that emergent projects are kinds of strategic projects which have bigger significance and bring a higher sense of urgency to organizations than the normal projects in their portfolio. Furthermore, the study indicated that emergent projects do not need any different project management methodology than typical projects do. Nonetheless, emergent projects are characterized by rarity, disrupting routine operations, enhancing company-customer relationship, causing resource reallocation, bringing profit, demanding higher budget, opening both internal and external new opportunities, posing risk due to shorter planning phase and limited implementation time, and capturing higher attention from top management. The major result we have found out in the research about the strategic impact of emergent projects is that they have a higher potential to bring profit and new business opportunities which in total make organizations more competitive in their respective markets.

The theoretical and managerial implications of our research have a common idea that emergent projects should be recognized and categorized as strategic projects of organizations. Further studies should be carried out on how the dynamic situations of business environments and emergent strategies affect the project portfolio of organizations. Moreover, it is worth researching on how the idea of emergent projects are dealt in the studies of strategic project management and project categorization both in the academic and practitioners world. Overall, the study has brought the linkage between emergent strategies and project portfolio management into light through the discussion on emergent projects.
**Key terms:** Emergent project, emergent strategy, strategic project management, project selection, project categorization system, project portfolio management
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1. Introduction

1.1 Background of the study

Project management is widely used nowadays in many companies in a systematic manner. And projects are well-accepted in many organizations as a strategic tool of gaining competitive edge in their market. Even those companies which are not project based are trying to make their operations project oriented so that they can cope with the unforgiving competition in their market. It has been a while since the dynamism of market forces is acknowledged as major factor on business. Its effect is mainly reflected in its influence on the strategies of companies. Hence, the concept of deliberate strategies began to be challenged and emergent strategies became to be the order of the day.

As the competition in the markets change, companies have to allow their strategies to emerge in a competitive manner. The question of emergent strategies is all about adapting and responding to the needs of the market in spite of the deliberate strategic direction set ahead of time. Now when strategies develop to be emergent from being merely deliberate, what about the projects inside the company which are supposed to help the company meet its strategies? Do these projects have any ways of emerging and becoming different than what they have been? Or do we start to have new projects which may be called emergent projects? And how do these projects differ with the normal projects? These are, we think, important questions to ask because projects are very much used nowadays as a tool of implementing the strategies of companies and the strong relationship of strategies with projects is appropriately recognized.

Recognizing the emergent nature of strategies is helping organizations to compete in the present dynamic business world. Those organizations whose activities are project oriented have double issues to deal with. As they allow their strategies to have an emergent form, their project portfolio will inevitably be affected in due course. Most of the time they need to come up with emergent projects which are more consistent with the latest strategy the company is embracing. This study will first have a look at the principle and practices of emergent strategies, strategic project management and project portfolio management. We will have a review of literatures on these subjects and project categorization and the interrelationship among them. All these concepts will be directed toward the relevance of studying on emergent projects.

1.2 Nature of the study

Nowadays, companies are facing constantly changing challenges from a highly competitive market. Organisations apply various methods to create long-term sustainability. For example, the time pacing approach suggested by Eisenhardt and Brown (1998) is about helping organisations reduce the impact from change, especially in the intensely competitive industries. It creates strategic opportunities while they utilize this approach to develop the competitive advantage in the market.
Further, Prahalad and Ramaswamy (2004) presented some ways of handling competition. The management of networking either in collaboration with or value creation with partners or customers is defined as an excellent source of competitive advantage. Creation of strategy depends on the continuous process of discovering the new sources of capability in the company. In addition, Eisenhardt and Brown (1999, p. 76) proposed a “patching process” as a strategic tool to deal with dynamic markets. The routine remapping process brings input to the strategy of companies and the process allows strategies to emerge down from the small business units within the organisation.

While the managerial activities of organizations is getting used to the fact that emergent strategies are more capable of giving them competitive edge, what about its effect on the project activities of the company? We are assuming that emergent strategies shape the project portfolio of organizations. And emergent projects have distinct features and strategic importance to the organizations they belong to. Subsequently, our research question focused on identifying the distinctive characteristics of emergent projects and their impact on the strategies of organizations in a highly competitive business environment. We conducted semi-structured interview with three companies in Europe and three other in Taiwan. While all of them are large and international companies, some are IT related and the others are Car manufacturing companies. All the interviews were done with those practitioners with a responsibility of managing a project or projects in their respective companies.

In order to find relevant literatures for our research and incorporate previous studies on the subject area, related articles are accessed in Umeå University database, Heriot-Watt university online library and Google scholar search engine.

1.3 Problem statement

Our research would like to single out one hardly addressed area in the daily project management activities. The basic starting points of our research are the impact of market dynamism and emergent strategies of companies. Thus, we are focused on those projects in organizations which are the results of this market dynamism and uncertainty. We called these projects emergent and are wondering what distinct characteristics they have and what strategic impact they have on large and international organizations.

Therefore, our research questions are: What are the distinctive characteristics of emergent projects? And what strategic impact do these emergent projects have on large and international organizations?

Justification for the distinctive nature of emergent projects will be based on a model taken from a previous study made on project categorization (Crawford, 2006). The model will be used to show the distinct nature of emergent projects and to find the possible category for them before trying to justify the need for identifying the
characteristics of “emergent projects”. The strategic impact of these emergent projects will be analysed after making research on a set of companies from Taiwan and Europe.

1.4 Scope of the study

The two important points we would like to address in our research are well stated in our research questions above and these are: the distinctive characteristics of emergent projects and their strategic impact on large organizations. We are not interested about those typical mainstream projects in a portfolio. On the contrast, we are looking for untypical projects which are at the borderline or even outside the mainstream of the current portfolio of projects as we defined emergent projects below. We are expecting to find out the distinct characteristics which make these projects different from the regular kind of projects. Additionally, we will be looking at their strategic impact on large organizations. We will not be comparing the organizations on the basis of geography or industry. Our randomly chosen organizations are all large and international organizations with diverse project offices.

The unit of analysis is the portfolio of projects.

1.5 Definitions of basic terms in the research

We would like to give next the definitions we are going to use for the concepts we will be using most and our own definition for emergent projects.

Project: “a temporary endeavour undertaken to create a unique product, service, or result” (PMI, 2004, p. 5)

Emergent strategies: are kinds of organizational strategies in which patterns or consistencies are realized in a series of decisions or actions despite, or in the absence of, intentions in contrast to deliberate strategies where patterns are realized as intended (Mintzberg and Waters, 1985)

Strategic project management: “the process of managing (complex) projects by combining business strategy and project management techniques in order to implement the business strategy and to deliver organizational breakthroughs.” (Grundy and Browns, 2003, preface)

Project portfolio management: coordinating projects with the operations of organizations so that it supports the strategies of the enterprise within the limits of its resources and under the oversight of its executives (Levine, 2005).

Emergent projects: untypical or irregular projects for the organization which are at the borderline or even outside the mainstream of the current portfolio of projects. These types of projects impact the company’s strategy with the aim to increase the organizations competitiveness.
1.6 Purpose of the research

The purpose of our research is to find out the nature and strategic impact of untypical projects which are at the borderline or outside the mainstream projects.

1.7 Architecture of the document

The introduction chapter gives general information on the background of the research, describes the problem being addressed in the study, states the research questions, briefs the scope, and defines the basic terms in the research. Finally, it reiterates the purpose of the research.

The second chapter is about the literature review we made for our research. We have seven categories in the chapter which are: emergent strategy, the prevalence of strategic project management (SPM), project portfolio management, project selection and prioritization, project categorization, emergent strategies and SPM, and emergent projects. We elaborated on each category so that the last category can be well defined and understood. All the theoretical and empirical reviews made in the categories are finally directed toward the relevance of studying on emergent projects.

The third chapter discussed our research methodology. Starting on the points why we chose our research area, we went on presenting our research philosophy, research paradigms, research approach, research strategy, the reasons behind our choice of companies, how we accessed our respondents, data collection technique and process, semi-structured interview questions, data analysis method, the credibility criteria like reliability, validity and ethical issues.

The fourth chapter is the analysis chapter. Using the template analysis technique, we examined each of the responses we got from our interviewees. We have twelve respondents in total though we decided to combine the responses we got from Volvo Trucks cab plant here in Umeå. Hence, we analysed nine sets of responses and made matrix to find out any patterns among the respondents. Finally, we discussed in detail the patterns we found in the matrix at the end of the chapter.

The final chapter is, of course, conclusion. We gave an overview of the study we made and described which of our assumptions are supported and are not supported. The research questions are answered. Theoretical implications are shown and managerial implications are listed. Strengths of the research are acclaimed and the weaknesses are uncovered. Before we end with a positive note about our research, we indicated further researches that can be done on the same area of our research.
2. Literature Review

2.1 An overview of the chapter

This chapter will dwell on the relevant and underpinning theories of our research area which is about emergent projects. We are assuming that emergent project are highly linked with emergent strategies in organizations and they are also strategic to these organizations. Therefore, we will start by discussing some literatures on emergent strategy and different sources of these kinds of strategies. Other literatures on strategic project management will be covered next to get the relevant and latest ideas on strategic projects and how they are managed. To see how emergent projects can be appropriately managed in a portfolio of projects, we will see the basic parts of project portfolio management, project selection and prioritization from some standard books which are published by the project management institute (PMI). Before we refine and discuss the linkage between the first two categories of the literature review, we will see other points on project categorization which will help us to use a recently developed model to determine how to categorize emergent projects. At last, we will make use of all the aforementioned concepts and theories to build some concept and definition for emergent projects.

2.2 Categories of the literature review

- Emergent strategy
- The prevalence of strategic project management (SPM)
- Project portfolio management
- Project selection and prioritization
- Project Categorization
- Emergent strategies and SPM
- Emergent projects

2.3 Emergent strategy

In our opinion, emergent project management is an unrecognized managerial tool for projects that are derived from emergent strategies in organizations. Though there are not many previous studies presenting the correlation between project management and emergent strategy, we are going to analyze “Emergent Project Management” through current discussion of strategy formation, focusing on the emerging nature of strategy. We will look at the different facets of emergent strategy from the learning and the environment perspectives together with top-down approach.

2.3.1 Emergent Strategy from learning:

Emergent strategy has been introduced by Mintzberg and other scholars starting from the 70s’ to 90’s (Mintzberg and Waters, 1985; Mintzberg et al, 1998). The more frequently companies face dynamic situations in their business environment, the more is learning process required. Learning from the past patterns supports the competitive
strength of the firm. As Lampel (1998) described it, learning organisations discover the gap between their firm and business environment. People learn inside the organization as well as learn from partners so that they can understand their boundaries. Moreover, learning organizations share the knowledge that can also be considered as a pattern of strategy formation. In ‘learning’, organizations have strategy formation as an incremental process which emerges from the integration of organizational learning and becomes organizational knowledge. The organization knowledge is the base for learning approach. Besides, the learning process of strategy formation is included both in the cognitive and learning school (Mintzerberg et al, 1998). Consequently, strategy is formed through the input from environment either in the mind of the strategists or in the organizational learning process. The other debate forwarded by Simons (1995) explained that emergent strategy process contains actions involved at all levels within an organization that targets on market opportunity and problem-solving goals in the business. Experimenting on new ideas corresponds to organizational learning. Therefore, emergent strategies usually arise from current deliberate strategies through learning processes. These processes are highly related to factors such as engagement with partners, new ideas which arises within the organization or even the experience gotten from the competition in the market.

2.3.2 Emergent Strategy from environment:

Mintzberg and Waters (1985) developed a foundation for further debates on emergent strategy (APM, 2000). Mintzberg et al (1998) re-emphasized the unintended nature of emergent strategy. Among the ten schools proposed by them, learning school directly supports the foundation of emergent strategy while the environment school offers a contract point of view. The complexity and forces of environment influences how companies will react to the competition market. Organisation should update their strategic plan and vision to cope up with environmental challenges. Another viewpoint illustrates environment as a possible force of strategy formation discussed in the environment school. The relation between the firm and environment determines the response strategy. The unpredictable situation requires immediate reactions which brings the formation of emergent strategy. Organisations have to make efforts in the given time constraint; therefore, the experimental or dynamic capability of an organisation is important to emergent strategy. Innovative capability supports firms to extend their competences in familiar and unfamiliar markets which help companies to reduce the overall risk from market uncertainty (McDermott and O’Connor, 2002). It is defined as a core competence in strategic management (Prahalad and Hamel, 1990). In general, organisation needs to have distinctive strength which can not be replaced by other competitors in the changing business environment.

2.3.3 Emergent strategy from top-down approach:

Leaders are key elements of strategy formation. Either the leader offers vision in the entrepreneurial strategy, or defines boundaries for umbrella strategy. Mintzberg and Waters (1985) additionally talked about entrepreneurial strategy which considers
general vision. However, the details of vision can be emergent. Moreover, process strategy takes into account the unpredictable and uncontrollable aspects of business environments. Thus when crucial changes happen in the environment, new visions emerge. Consequently, the leader who makes the decision affects the strategy of the company and makes it to emerge. One important debate is that the emergent nature of strategy requires flexibility from top management. According to Mintzberg and Waters (1985), the umbrella strategy illustrates the practitioners’ viewpoints in the strategy formation. The emergent ideas therefore are suggested by champion or middle managers in the organisation. Within the general guidelines of umbrella strategy, middle managers are capable to initiate strategies from the previous strategic pattern in the organisations. The study conducted by Burgelman (1991) supported this viewpoint. He mentioned that top management's role is to ensure the implementation of intended strategy. The successful firms apply top-down strategic and bottom-up experimentation of new opportunities.

There are important arguments regarding emergent strategy that we need to pay attention to. First of all, pure emergent strategy is rare. However, emergent strategy can be seen as patterns of strategy formation. Second, emergent and deliberate strategies have different approaches with regard to strategy formation processes. The approach emergent strategies take considers cognitive process which is about learning from the organisation itself or external environment, or competitive factors in the industries. On the other side, deliberate strategies have an approach which relatively covers meticulous planning process, specific formation principles, or structured analysis methods. Effective strategist mix diverse ways of strategising to respond to the environmental challenges. It is however noteworthy to mention that emergent strategy is increasingly seen as a tool of learning in organizations.

After reviewing some studies on the subject of emergent strategy, we could only manage to find a little connection between emergent strategy and projects or project management. When Grundy (1998) defined the emergent project strategy, he talked about the projects goals which are related to high level of uncertainty. These final and intermediate goals sometimes will deliver good result in unpredicted ways. In his discussion, value of project strategy goes through a route of different formats. Originally, projects may start as deliberate and the emergent phase is considered as part of the process. What he called “the submergent strategy” comes after emergent strategy in the projects. When the initial goal faces challenges, project activities require flexible implementation. He emphasized the emergent and submergent stages as crucial to the project management. Most project deviation happens in these two phases. Economic value of project and program management is suggested as one essential concern of long-term benefit.

As “emergent project management” is discussed by Ramaprasad and Prakash (2003), it is basically related to the learning process of project management. They described ‘Emergent Project Management’ as an excellent approach to enhance the integration of local knowledge to the global body of project management knowledge. They
designed five key elements which particularly emphasizes that emergent project management is a combination with top-down knowledge and emergent local know-how. It will improve project performance from the inter-project and intra-project aspects. ‘Emergent design’ is a new strategy forwarded by Cavallo (2000) in his two-year education project in Thailand. The report illustrated that most of the time, pre-planned strategy system is top-down approach. On the other hand, the emergent approach of strategy formation aims to solve the problem which is not foreseen in the plan and it depends more on the involvement of new knowledge.

Emergent projects are, therefore, a kind of projects which take into account emergent strategies as part of their nature. Additionally, the emergent projects can have organizational learning within projects themselves. Emergent projects integrate knowledge pool in the current situation as better ideas emerge without intention.

2.4 The prevalence of strategic project management

Project management has developed into a way of becoming competitive in the business world both in the public and private organizations today. Projects are essential to the survival and growth of organizations today. Projects help to improve business processes, to develop new products and services, and to assist companies respond to the dynamics of environment, competition, and market (Wessels, 2007). Businesses are becoming more and more project centred and project management practices are more needed than before. The managerial tasks of project management are those common elements of management: Planning, organizing, controlling, leading and motivating. But projects are by nature very dynamic; their temporal, unique, and complex characteristics require both ‘hard skills’ of techniques and ‘soft skills’ of leadership (Gardiner, 2005, p. 7-8).

One of the recent issues on the subject of project management is how to implement the business strategy of companies using projects. Strategic project management came to the light when companies became too concerned about having sustainable competitive advantage due to the dynamic nature of business environments (Green, 2005). It is an attempt to synchronize business strategies with the project portfolio of organizations. Some people consider ‘Strategic Project Management’ (SPM) to be a new concept to be studied and probed further in the project management discipline. On the other hand, others say is it all the same breed of project management without any distinct nature. That SPM is much concerned with business strategy and project management techniques is what most of its proponents have in common though (Grundy and Browns, 2001; Wessels, 2005).

Important points about Strategic Project Management (SPM) have been made by Sebastian Green (2005). After testifying to the fact that there is a trend of affixing the strategic label on business and management studies, he said “… it is not surprising that the call is getting louder for the development of strategic project management (SPM). It sounds better, more important, more professional and, of course, more
valuable” and he continued querying, “What is the substance of this shift from the basic function to the enhanced model? What is signified by the addition of the word strategic to project management? And what exactly is SPM?” (Green, 2005, p. 2) In an interview where Naughton asked Green about his views of SPM as a vehicle for competitive advantage, he said “Strategic project management is the management of those projects which are of critical importance to enable the organisation as a whole to have competitive advantage” (Naughton, 2006). According to Green, therefore, SPM is particular about some projects from the project portfolio of an organization. These projects must be more strategically significant than the rest of the projects in the portfolio and their strategic significance comes from their ability to give the company a more sustainable competitive advantage. As a result, we find SPM to be mainly about “managing your business strategy in the most effective way so that it delivers organizational breakthroughs” (Grundy and Browns, 2003, preface).

Shenhar (2004) had proposed a similar concept called ‘Strategic Project Leadership (SPL)’. He said SPL is an “… approach to project management that is focusing projects on creating competitive advantage and winning in the marketplace. This approach is particularly relevant to strategic projects that are initiated to create the company’s future, including almost all R&D projects.” (Shenhar, 2004, p. 569) One of his seven principles of SPL is about strategic project portfolio management and he described how to expand the focus of organizations from project management to strategic perspective. As Milosevic and Patanakul (2005) discussed the success factors of standardized project management (StPM), they found out that various StPM tools, project leadership skills and processes are the major factors of standardization and project successes in high-velocity industries. Most importantly, they affirmed that these variables “are typically customized to fit the strategic purpose of the company” for projects to be successful (p. 181). It can be deduced that strategic impact of projects is an inevitable criteria of success no matter how standardized the project methodology is. With proper project selection and prioritization, therefore, the linkage between the activities of project management and corporate strategy can be assured for a better competitiveness.

Taking the significance of strategic project management further, some scholars emphasize the importance of recognizing the difference between projects regarding their strategies. Payne and Turner (1999) stated that organisations should recognize different project management approaches in a detailed level based on their strategic plan. It is suggested that tailoring projects according to their type will support the performance of firms. There is another viewpoint which suggests that projects are more than a tool to deliver company strategies. The context of each project has a different final impact on strategy. Kujala et al (2008) claimed that project is more than a tool of strategy implementation to a parent organisation. The degrees of project’s independence influence the tactics issue of each and single project. Therefore, flexibility between projects and company strategies are suggested. According to Artto
et al (2008), the autonomy of project is one of the essential concerns of project strategy. In setting up strategy for projects, the difference among projects should be recognized so that each project can be effectively managed in its distinct situation.

On the other side, in the issues of managing multiple projects simultaneously, Payne (1995, p. 163) identified three areas which require more studies: “projects which differ in terms of size, required skills, and urgency”. The degree of urgency in different projects influences the decision making process in prioritization and creates complexity in project and portfolio management. Overall, identifying all the different aspects of projects determines directly or indirectly the implementation of company strategy. Furthermore, the various causes of differences among projects in a portfolio are essential factors to deliver value to the company.

To put it in a nutshell, we need “a holistic approach to strategic project management” as Lampel recommended by which he meant “more research and more work that explicitly aims at developing theory and practice that has a comprehensive and strategic perspective in mind” (Lampel, 2001, p. 435). As he suggested, we too believe that more comprehensive researches and works are needed to develop a strategic theory of project management. However, the common denominator of all these different-and-not-different assertions is the need for projects to be aligned with the business strategies of organizations.

The obvious fact is that all the projects a company has do not have the same strategic impact to the company. Project based organizations have a portfolio of projects and they need to select and prioritize their projects according to their strategy. What we are going to see in the next subject will take in hand the issues of managing a portfolio of projects in an organization and how to prioritize them.

2.5 Project portfolio management

Project portfolio includes “a group of projects that are carried out under the sponsorship and/or management of a particular organization” (Archer and Ghasemzadeh, 1999). These projects in the portfolio compete for limited resources such as people, finances, time, etc. In a project portfolio, projects are continuously controlled and revised and hence risks are significantly reduced (Cooper et al, 1997; Turner and Müller, 2003). Project portfolio management (PPM), therefore, synchronizes projects with the operations of organizations so that it supports the strategies of the enterprise within the limits of its resources and under the oversight of its executives (Levine, 2005). Three processes are usually included: screening and prioritization of project proposals, simultaneous reorganization of projects in the portfolio and allocation of available resources accordingly (Blichfeldt and Eskerod, 2008).

Moreover, portfolio is known to include different projects and programmes which should not necessarily be interdependent or directly related in an organization (PMI,
However, projects and programmes are grouped in a portfolio in such a way as to “meet strategic business objectives” (PMI, 2004, p. 16).

The modern science of project portfolio management comes from the combination of strategic planning and project management disciplines (Gardiner, 2004). Wessels (2007) tried to distinguish strategic project portfolio management from the traditional strategic planning process. He stated that PPM is useful as a strategic tool to give a rational decision framework required in the project investment decisions. Accordingly, PPM is the art and science of linking project portfolios with the needs and expectations of an organization’s investment strategy (Dye and Pennypacker, 1999).

The Project Management Institute (PMI) claims that “Project management exists in a broader context that includes programme management, portfolio management and project management office.” (PMI, 2004, p. 16) However, Wideman (2006, p. 1) argues that project portfolio management is “literally ’above and beyond’ project management” and stressed the point that project portfolio management is more than just another technique of project management. He said PPM “spans all the way from the vision of the executive suite, through project management to the actual realization of benefits, to the enterprise and consequent successful competitive positioning.”

The PMI’s standard for portfolio management (PMI, 2006) is one of the most influential works on the area of portfolio management. The book has three sections. The first section dwells on the framework of portfolio management in which introductory notes are given on portfolio management, role of portfolio manager, and portfolio management metrics and reporting. The second section is about the standard for portfolio management in which portfolio management processes are addressed. The last section has appendices on tools and techniques of identification, categorization, and evaluation etc. of projects. The book defined portfolio management as “…the centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing and controlling projects, programs and other related work, to achieve specific strategic business objectives.” (PMI, 2006, p. 5)

The introductory chapter in the book further discussed the linkage between portfolio management with organizational strategy, governance, operations management, project and program management and gives us a picture of how crucial portfolio management is. These linkages can be seen in the pyramidal-shaped figure below.
As fig. 1 depicts it well, project portfolio planning and management receives strategy from the higher managerial body, interacts with the high-level operations management and influences the outcome of both the projectized and recurring activities of the company.

Taking the significance of portfolio management in a different direction, Levine (2005) asserted that PPM does more than bridging the operations and projects of an organization. He said PPM serves as a ‘hub’ which makes different business and project activities harmonious to accomplish the common cause of an organization. He compared PPM with what he called traditional project management. He agrees with Wideman (2006) that the lifespan of PPM is different and wider than that of the traditional project management. The life span of this project portfolio consists of the following elements:

1. Identification of needs and opportunities
2. Selection of best combinations of projects (the portfolios)
3. Planning and execution of the projects (project management)
4. Product launch (acceptance and use of deliverables)
5. Realization of benefits

This project portfolio life span, extended on both ends than the usual life span of projects which mostly ranges from authorization to delivery, “requires the involvement and leadership of the executive side of the organization and the development of a portfolio governance culture, processes and tools” (Levine, 2005). Thus, when PPM is allowed to become the centre of business activities in an
organization, the strategies, resources and the leadership of executives will be geared to the business objectives of the organization.

2.5.1 Project selection and prioritization

One of the first and main tasks in the PPM is project selection and prioritization and it is inevitable that projects compete for financial and human resources in different departments and divisions of organizations. At times, organizations find themselves with a lot of interesting projects in their portfolio for the disproportionate resources they have. Organizations have a wide spread problem of having more projects than they can afford (Blichfeldt and Eskerod, 2008; Archer and Ghasemzadeh, 1999; Cooper and Edgett, 2006). The question is how to determine those which are more strategic and prioritize them accordingly in the limits of the available resources. There should be selection criteria against which proposed projects can be evaluated. The initial stage of project evaluation is always about project selection and prioritization. The right project pipeline will have a right combination of projects which are aligned with the strategies of the organization, help to achieve its goals and can be implemented within the limits of its resources (Levine, 2005). According to Levine (2005), proposed projects can be evaluated through –

- A ranking of value and benefits
- An appraisal of risk (in achieving these benefits)
- An inventory of resource availability and allocation
- An idea of an optimum or acceptable size of the project pipeline

In a recent study on the strategic project selection in the public sector, Puthamont and Charoenngam (2007) reviewed many studies on the process of project selection each of which have different perspectives as shown in each column of Table 1. All the studies they reviewed gave a project selection process depending on the project types except the first column which is about a general project selection process. The table, therefore, shows us the criteria to be used in selecting different kinds of projects in different contexts. We can infer that there can not be hard and fast rules for project selection. It all depends on what kind of project we have and its context.
Table 1: Project selection process on different criteria

Source: Puthamont and Charoenngam (2007)

<table>
<thead>
<tr>
<th>General project selection</th>
<th>Construction project selection</th>
<th>R&amp;D project selection</th>
<th>IS project selection</th>
<th>Infrastructure project selection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intrinsic criteria</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Project-identification ability</td>
<td>1. Availability of capital</td>
<td>1. Successful completion of the project</td>
<td>1. Financial related criteria</td>
<td>1. Project development objective</td>
</tr>
<tr>
<td>2. Resources requirements and availabilities</td>
<td>2. Economic situation</td>
<td>2. Work related to existing products only</td>
<td>2. Organizational needs related criteria</td>
<td>2. Strategic context</td>
</tr>
<tr>
<td>5. The time horizon of the project</td>
<td>5. Benefit</td>
<td>5. Patenting</td>
<td>5. Risk related criteria</td>
<td>5. Project analysis</td>
</tr>
</tbody>
</table>


|                      | 15. Strategic context | 15. Strategic context | 15. Strategic context | 15. Strategic context |
|                      | 17. Project rationale | 17. Project rationale | 17. Project rationale | 17. Project rationale |
|                      | 20. Main conditions | 20. Main conditions | 20. Main conditions | 20. Main conditions |
|                      | 22. Compliance with bank policies | 22. Compliance with bank policies | 22. Compliance with bank policies | 22. Compliance with bank policies |
There are techniques and procedures to be used as companies try to select the most appropriate projects for their portfolio. And there are many articles and books on the subject of project evaluation and selection with hundreds of different techniques. These tools and techniques of project selection range from criterion lists, strategy tables, scoring tables, visual graphs, and force-field analyses to optimization models, holistic portfolio management frameworks, and the interaction with a portfolio board (Müller and Turner, 2007). The many tools and techniques of project selection are designed to make projects fit with the surrounding characteristics of organizations and their strategy (Englund and Graham, 1999). In one of their studies, Müller et al (2008, p. 39) confirmed that “strategy aligned portfolio selection [to be] in positive correlation with achieving results”.

Nevertheless, as all projects are unique, no technique can be applicable to all. Archer and Ghasemzadeh (1999), however, attempted to forward an integrated framework which separates the project selection process into distinct stages. Each of these stages accomplishes a particular objective and creates inputs to the next stage. They claim that their integrated framework methodology decomposes the project selection process into a flexible and logical series of activities that involve full participation by the selection committee.

With all the available techniques and procedures of project portfolio management, companies still continue on faltering on these crucial issues. According to Cooper and Edgett (2006, p. 3), “Only 21 percent of businesses’ portfolios contain high value-to-the-corporation projects; only one-in-four businesses effectively rank and prioritize their projects; and less than one business in five has the right balance of projects in its development portfolios; these are dismal results, but the story continues: The great majority of businesses (76 percent) have too many projects for the resource available, which means that projects are under-resourced; and only 21 percent have a systematic portfolio management or project selection system in place.” Their rich experience in the field of new product development projects and PPM in a wide variety of companies, they drew ten “best practices” in portfolio management. These best practices include knowing when to stop bad projects at the right time, using different criteria for different project types, using multiple selection methods in combination, using scorecards to yield a higher value and more balanced portfolios, use the right financial approaches and building in periodic portfolio reviews to force rank your projects.

Blichfeldt and Eskerod (2008) indicated that though most researches focus on the project selection aspect of PPM, other researches are making it wider even to embrace the day-to-day management of the project portfolio. They referred to Dawidson (2006, p. 1) in their article as he related the changes occurring in the studies of PPM and quoted him as saying, “During the past decade, the research on project portfolio management has expanded into a more complete managerial approach – beside the
focus only on tools, techniques and methods – including aspects on how project portfolio management is practiced’.”

Project portfolios should ideally help to implement the strategies of organizations in a systematic and hierarchical manner but all will not go as it is deliberated initially. Market and environment dynamics bring a lot of surprises and thus management executives should be accustomed with emergent activities both in their strategy formation and in the arrangement of their project portfolio.

2.6 Project Categorization

Project management as a profession is more studied than projects themselves (Archibald, 2004). The difference and similarity among a wide range of projects is still unaccounted for. The aspects of projects both in all projects and in each kind of projects which can be categorized should be identified. The query presented in the project called “A Global System for categorizing Projects”¹ initiated by Archibald in 2004 indicates the general need for project categorization system. Significant differences among a large number of projects in a government, business and industry sectors and even within an organization are calling for a standard project categorization system. Though many project management principles and practices are set to be common to many projects regardless of their types, both project management researchers and practitioners are recognizing the inherent diversity of many projects and the need for segregating them in different ways for several purposes (Archibald, 2005).

As categorization and classification are literally different (Crawford et al, 2002), project categorization is not the same as project classification. In classification, we can have projects sorted into mutually exclusive sets while projects with similar properties are sorted into sets of items in categorization. Accordingly, we can have a single project sorted into many sets in the categorization system but we cannot have one same project sorted into different sets in classification (Crawford, 2006; Archibald, 2005). Moreover, projects can be classified under one category or sub-category.

Different organizations have their own way of categorizing projects though most of them do not recognize it. De facto project categorization can be seen, for example, in the special interest groups of PMI, in the PMI Body of Knowledge (PMBoKs), in the International Project Management Association (IPMA) bodies of knowledge, organizational structures like construction and IT firms, consultants and in university course offerings. The question is to make project categorization a matter of systematic approach than an unrecognized way of handling various projects in an organization. A systematic approach to project categorization will generally help to improve the

¹ [http://www.pmforum.org/library/cases/2004/cases04-1112.htm](http://www.pmforum.org/library/cases/2004/cases04-1112.htm)
practices of project management, duplicate and wasteful efforts can be avoided and all relevant factors can be assured to be considered.

Different models of project categorization systems are being suggested by different project management professionals and academicians. As a draft illustration, Archibald (2005) constructed a two dimensional matrix consisting of the purposes on one axis and the methods (based on specific categorization criteria) on the other axis (See Table 2) and concluded the study by making a point that any systematic approach should be hierarchical. In the matrix, the purposes of projects can be refined and prioritized while examining various categorization methods simultaneously. Archibald then suggested (Archibald, 2005, p. 5), “Those methods that appear to be the most useful for the highest priority purposes would then be given more rigorous examination and systematic design”. And Jung and Lim (2007) suggested a framework for categorizing, selecting, and executing candidate projects based on the Six Sigma concept.
Table 2: A draft illustration of Purposes/Methods Matrix for Project Categorization

**Source: Archibald, 2005**

<table>
<thead>
<tr>
<th>Purposes</th>
<th>Market Share &amp; Strategic Intent</th>
<th>Project Product or End Result</th>
<th>Development Project versus Deployment Project</th>
<th>Other Project Attributes or Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STRATEGIC PM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project selection</td>
<td>X</td>
<td>?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Prioritize selected projects</td>
<td>X</td>
<td>?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Define Portfolios</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage project portfolios</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allocate resources to portfolios and projects within portfolios</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>X</td>
<td>?</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>OPERATIONAL PM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select/assign project managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Design/select best project life cycle models</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select/improve project planning, scheduling, executing, and controlling methods</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select/develop PM software applications</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Build knowledge base of best practices</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve risk management methods</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate organizational PM maturity</td>
<td>?</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Link success and failure factors</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Select tools and approach</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PM EDUCATION / TRAINING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve/focus educational and training courses</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop specialized case studies</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organize speaker tracks at congresses</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PEOPLE DEVELOPMENT IN PM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop specialized certification of project managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Develop specialized certification of PM support positions</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop PM career paths for individuals</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study of Crawford et al (2006) on project categorization system took a different direction. The aim of their study was to develop a holistic project categorization system focused on the organizational purposes it serves and the attributes of projects. They made a clear distinction between the purpose of the categorization system and
the attributes used to sort projects into groups. They did not find any simple relationship between the two bases of their model. Consequently, they presented two models.

According to their study, the two primary purposes for categorizing projects in organizations which undertake projects are:

- To assign priority for resources to align projects with strategy and optimize benefits from the portfolio of projects undertaken
- To develop appropriate competencies to undertake projects, and to assign competencies to projects undertaken to deliver them successfully to achieve the benefits required

The minor purpose being:
- To differentiate projects from operations; to differentiate projects, programs and portfolios of projects and provide a common language for project management within the organization

We found the model based on the attributes of projects to be easier to understand, wider and simpler in its application. From the decision tree of the ‘attributes map’ in Figure 2, the fourth project attribute which is strategic importance is where “emergent projects” are assumed to be more appropriate as the study is on the strategic impact of these kinds of projects. The project types of this fourth attribute in the tree are mandatory, repositioning and renewal (Müller and Turner, 2007) and emergent projects can be any of them depending on the need and situation of a given organization.
2.7 Emergent strategies and SPM

Emergent strategies signify adaptation to the business environment so that the company can pave a more sustainable route for itself. But, emergent and deliberate strategies are not mutually exclusive. Mintzberg et al (1998, p.11) put it well when they said “…perfect realization (of strategies) implies brilliant foresight, not to mention an unwillingness to adapt to unexpected events, while no realization at all suggests a certain mindlessness. The real world inevitably involves some thinking ahead as well as some adaptation en route.” Nevertheless, the significance of emergent strategies becomes more evident as the general business environment becomes more dynamic and the number of companies who are using project management principles and practices to implement their strategies are increasing year after year. Thus there will become an obvious connection between emergent strategies and strategic projects as organizations endeavour to align their projects with their emerging strategies. It is not only their strategies which are affected by the constantly changing internal and external business environment. The portfolio of their projects will have to be also changed accordingly. Otherwise, the projects in the portfolio will have no updated strategy to be aligned with and a lot of wastage in resources can
occur if projects are not allowed to emerge together with the emerging strategies. Projects can not have a different strategy to serve while the company is led by a strategy emerged with another face unknown to the portfolio of their projects.

Inevitably a holistic project categorization system will make it easier for organizations to manage the portfolio of their project. The selection and prioritization of projects and the strategic alignment of the portfolio will be based on a more systematic approach than an ad hoc system. Emergent projects can be categorized under the category of strategic importance in the attributes map (Figure 2). These strategically important emergent projects can be of different types depending on the needs of organizations the important point is to identify these projects for what they really are.

2.8 Emergent projects
We conclude that emergent projects are a kind of projects which take into account emergent strategies as part of their nature. Moreover, the emergent projects can have organizational learning within projects themselves and integrate knowledge pool in the current situation as better ideas emerge without intention.

As emergent strategies are having significant impact on the competitive edge of organizations in the current business world, we see evidence for projects which get their form and content in the mould of emergent strategies should be studied more. The purpose of this thesis is to find out the distinctive characteristics of what we called “emergent projects” - projects which were not part of the project portfolio in the beginning but emerged together with or after emergent strategies. They surfaced in the portfolio when the emergent strategies begin to influence both the project portfolio and strategies of organizations. Their influence can be due to various internal and external factors such as financial and organizational need or competitive environment. And the assumption is emergent projects have distinct features and they can be categorized in one of the two models forwarded by Crawford et al (2006). The model based on the attributes of projects, as shown in figure 2, is preferred for its simplicity and wider application. The concept of emergent projects found its place in the attributes map of project categorization system and now the strategic impact of these emergent projects and their characteristics will be analysed after making research on a set of companies.

Having dealt with the theoretical and empirical literatures which are relevant to our studies, we will now continue to elaborate on the research methodology of the study in the next chapter.
3. Methodology

3.1 Choice of the subject

This chapter will deal with all the issues of our research methodology starting from our research philosophy to the evaluation of our research credibility. Most of the following choices of our research methodology are based on the research books written by Saunders et al (2007) and Bryman and Bell (2003).

3.2 Research philosophy

Research philosophy is about the nature of knowledge a researcher develops in a particular field of a research (Saunders et al, 2007). There are three major ways of thinking about research philosophies which are epistemology, ontology and axiology. In ontology, the two aspects we find are objectivism and subjectivism. Objectivism ignores social actors as part of social entities while subjectivists put them as the cause for every social phenomena. In our research, we are considering managers and clients to initiate emergent projects which reflect the notion of subjectivism in the ontology. Moreover, as the subject of our research embraces the fact that businesses are constantly changing and the assumption that managers or clients are involved in the process of initiating emergent projects, the appropriate epistemology would be interpretivism. As part of epistemology, interpretivism considers the difference among researches due to the human factor and do not find it necessary to generalize findings. Therefore, our research philosophy is based on subjectivism and interpretivism notions of ontology and epistemology respectively.

3.3 Research Paradigms

The concept of research paradigms is helpful to clarify the points of research philosophies. There are four research paradigms to consider: functionalist, interpretive, radical humanist and radical structuralist (See fig. 3). These four research paradigms are arranged in such a way as to correspond to four conceptual dimensions: radical change, regulation, subjectivist and objectivist. The last two terms are the two aspects of ontology. Radical change refers to judgement about how organizations conduct their affairs and suggests ways which can bring fundamental changes. On the contrast, the regulatory perspective tries to explain things within the current framework organizations are doing their job without suggesting any radical change. It is less judgemental and critical.

As our research considers managers and clients playing active role in creating emergent projects and hopes to uncover the distinct nature of these kinds of projects, the interpretive research paradigm is the appropriate one. The concern of interpretive paradigm is to understand the fundamental meanings attached to organizational affairs and to discover irrationalities if there are any. It is partly on the subjectivist dimension and partly on the regulation dimension. Keeping in line with the subjectivist research philosophy, the regulation dimension is less judgmental and critical. In our research,
we are more into explaining what emergent projects are in organizations. We are assuming that emergent projects are already there in organizations but they need to be recognized for what they really are so that they can be done more successfully and more effectively. We would like to show the irrationality of embracing emergent strategies without considering the consequent disruption on the current project portfolio of the company resulting in emergent projects. Suggesting any radical change in the existing affairs of organizations is not part of our research objectives. Therefore, our research paradigm is an interpretive one with a regulatory and subjectivist perspective.

3.4 Research Approach

Familiar management issues underpinned our research area. The issues of emergent strategies, strategic project management, and project portfolio are not new areas to talk about. Strategic project management could be a less dealt subject than the rest but it is not difficult to find literatures on it. But it is almost impossible to find any project management literature on emergent projects. What we are going to do is to gather data from some large international companies in the IT related and car industry which will help us somehow formulate a theory about the distinct nature of emergent projects and their strategic impact in these organizations. As a result, our research approach is inductive. As theory follows data in inductive research, we will try to make sense of the interview data we collect by analysing those data and formulating a theory at last.

3.5 Research strategy

Comparing with quantitative research strategy, qualitative research usually emphasizes the descriptive approach in data collection and analysis (Bryman and Bell,
2003). In this research paper, we expect to have interesting patterns to emerge out of our data. The qualitative research offers proper approach to understand the various viewpoints from an unclear theoretical background. According to Bryman and Bell (2003, p. 14), “an inductive research strategy of linking data and theory is typically associated with a qualitative research approach”. As we discussed it earlier, our research approach is an inductive approach. We assume that our concept of emergent project will be shaped after this thesis work. This study is going to figure out the characteristics of emergent projects and in the meanwhile it will analyze the relationship between the emergent project and company strategy.

Exploratory studies are about finding out “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light” (Robson, 2002, p. 59) and descriptive studies are usually a “forerunner to a piece of exploratory research” (Saunders et al, 2007, p. 134). Consequently, we adopted exploratory and descriptive studies as a research strategy of our study to find a way of going about answering our research questions. Before trying to explore new insight about emergent projects, we needed to properly identify the companies to be interviewed and to describe their profile. In doing so, we were able to have a clear picture of the phenomena on which we wished to collect data prior to the collection of the data. As an exploratory study, however, our research mainly focused on clarifying our understanding of what we called “emergent projects” – their distinctive characteristics and strategic impact on large organizations. And additionally, “If you are conducting exploratory research you must be willing to change your direction as a result of new data that appears and new insights that occur to you” (Saunders et al, 2007, p. 133). We made flexibility to be inherent in our research and we even know that time is well spent if our data suggests finally that the research is not worth pursuing.

3.6 Choice of Companies and Access to Respondents

Our aim in the research is to demonstrate that emergent projects can be categorized in a project portfolio because of their distinct characteristics and strategic impact to organizations. We interviewed project managers of different working experience from various international organisations. The issue of emergent projects is hardly raised in project management literatures. The term is not widely used or defined clearly in the general business world. Therefore, our first concern when we select the companies for interview was the scale of the organisation. We considered large business unit of international companies who pay more attention on project categorization. They would consider the different performance delivered from each project category. Further, in such business environment, there are more issues and opportunities to maintain sustainable competitive advantage. The dynamic challenges could come within the small business units or divisions of the organisation or from the threat outside of the company.

In addition, the diversity of organisations in our sample is another concern. We
review the possible industries that may exist in the context of emergent projects, and then we start the first contact based on our personal networking and ease of access. In our opinion, the possible industries are either those who are in a high competitive market among major players or those which require innovative process and technology in research and development. Further, we attempted to find out if there is a similar pattern in all the data collected. Saunders et al (2007) defined cross-sectional research design as a study which is conducted in a specific context at a particular time and Bryman and Bell (2003) explained that this kind of research is interested in diverse answers. Since the issue of emergent project is a new research area, we try to approach companies that offer different products or services in order to balance the data. Further, we expect to get various responses from more than one case in this thesis study.

At the end of October (2008), we started to contact companies in Taiwan and in Europe. We used email, MSN, Skype, phone call, and face to face conversation to approach those interviewees from each of the respective companies. In the beginning, we needed to filter the possible interviewees within each of those companies. The least we expected from our interviewees is for them to understand the basic project management knowledge and some experience in managing projects. As our unit of analysis is portfolio of projects, we additionally wanted our respondents to have experience in managing portfolio of projects.

Our first contact was mainly to brief them about the purpose of our research and to understand the product or services of each of their company. This preparation helped us to ensure the quality of our interview data with less bias on any of our interviewees. Moreover, the preparation work made it possible for us to have diverse sources of data. During this process, we have assured voluntary participation and reviewed the responsibility and background of the interviewees. Finally, we decided to conduct semi-structure interview with three international companies in Taiwan, one in Switzerland, one in German, and the other in Sweden.

3.7 Data Collection technique and process
Our research focus is on emergent projects and it is not frequently discussed in the current literatures. Thus, we decided to conduct semi-structured interview to collect a primary data. As Bryman and Bell (2003) discussed, the interview in qualitative approach is focused on the opinions of interviewees. We wanted to collect as detailed responses as possible in the process. The framework of the interview questions was designed in four sections. Bryman and Bell (2003) stated that in semi-structured interview, the questions are suggested to include a set of specific topics as a basic interview guideline. Therefore, we prepared interview questions in accordance with the different aspects of the research question. When we conducted the interview, we had to ask further questions as they emerge during the interview process to get more
precise responses. The interviewee is allowed to answer the questions with great level of flexibility and openness.

We finalized preparing the interview questions in mid November. Firstly, we conducted one pilot interview with a project manager in a Swiss company. After the pilot interview, we discussed with our supervisor to revise the questions and the definition of emergent projects. We had to rearrange the questions and rephrase our definition for emergent projects so many times so that our interviewees could easily understand it and find it to be relevant with what they are doing. After that, we rearranged the wordings, phrases and flow of questions in the final structure of the interview questions. Due to the fact that we approached all the companies on the basis of convenience and ease of access, each of the researchers had their share in contacting and interviewing the involved companies. We were continuously discussing about the structure and how to describe each question in order to get the most out of the interview and to have consistent data transcription.

Most of our interview took around 45 minutes to an hour. Before the interview, the interviewee had the chance to review all the questions. Some of them replied their draft answer before the interview appointments. During the interview session, the researcher led the flow through face-to-face, internet calls by MSN or Skype. The respondents from the car companies chose to reply through email. The detailed methods of each interview are summarized in following table.
Table 3: Interviewee detail and Interview method

<table>
<thead>
<tr>
<th></th>
<th>Company</th>
<th>Interviewee Status</th>
<th>Working experience in the company</th>
<th>Country</th>
<th>Interview method (medium of communication)</th>
<th>Major product or services (or project they are involved with)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Integrated Silicon Solution, In (ISSI)</td>
<td>Product Manager</td>
<td>7 years</td>
<td>Taiwan</td>
<td>MSN</td>
<td>DRAM</td>
</tr>
<tr>
<td>2</td>
<td>Novatek Taiwan Ltd</td>
<td>Product planer</td>
<td>Over 3 years</td>
<td>Taiwan</td>
<td>MSN</td>
<td>Web cam controller LCD driver IC</td>
</tr>
<tr>
<td>3</td>
<td>Trend Micro, Taiwan Ltd</td>
<td>Technical Manager</td>
<td>2 years</td>
<td>Taiwan</td>
<td>Skype</td>
<td>System development (Internal the enterprises)</td>
</tr>
<tr>
<td>4</td>
<td>Schneeberger AG</td>
<td>Project manager</td>
<td>2 years</td>
<td>Switzerland</td>
<td>Face-to-face</td>
<td>Elements of linear bearings</td>
</tr>
<tr>
<td>5</td>
<td>Volvo Trucks Cab plant (combined)</td>
<td>Project managers</td>
<td>2-8 years</td>
<td>Sweden</td>
<td>Email</td>
<td>Software solutions and IT projects</td>
</tr>
<tr>
<td>6</td>
<td>Daimler AG</td>
<td>Senior project manager</td>
<td>Over 5 years</td>
<td>Germany</td>
<td>Email</td>
<td>Company start-ups, global IT system replacements, major transformational projects, worldwide company renaming after de-merger from Chrysler</td>
</tr>
<tr>
<td>7</td>
<td>Daimler AG</td>
<td>Project manager</td>
<td>16 years</td>
<td>Germany</td>
<td>Email</td>
<td>Innovative projects and Improvements</td>
</tr>
<tr>
<td>8</td>
<td>Daimler AG</td>
<td>IT project manager</td>
<td>Over 6 years</td>
<td>Germany</td>
<td>Email</td>
<td>Software solutions</td>
</tr>
<tr>
<td>9</td>
<td>Daimler AG</td>
<td>IT Business Consultant</td>
<td>9 years</td>
<td>Germany</td>
<td>Email</td>
<td>Software solutions and IT services</td>
</tr>
</tbody>
</table>
3.8 Data analysis

Our inductively based analytical strategy will take an approach known as template analysis (Saunders et al, 2007). Template is a list of the codes or categories that represent the themes revealed from the data that have been collected. In template analysis, codes are predetermined and then amended or added to as data are collected and analyzed. It offers a more flexible route to analysis, which would allow researchers to amend its use to the needs of their own research project. It is an analytical technique with codes and categories shown hierarchically to help the analytical process. The template is subject to revision as part of the qualitative analysis. Consequently, it helps to select key themes to explore and to identify emergent issues that arise through the process of data collection and analysis and finally the relationships among them.

Our template for our inductive qualitative data analysis looks like the following:

1. Company context
   a. History
   b. The size of the company
   c. Products
   d. Clients

2. Interviewee context
   a. Department or division
   b. Responsibility
   c. Working years
   d. Project experience

3. Distinct characteristics of emergent projects
   a. Where new project ideas come from
   b. Project categorization
   c. Key issues on emergent projects
      - Frequency of emergent projects
      - Key decision makers on emergent projects
      - Key issues on managing emergent projects
      - Effects of emergent projects on other projects
      - New opportunities emergent projects bring
      - Company regulation or reporting process for emergent projects

4. Strategic impact of emergent projects
   a. Changes made in the company to be more competitive
   b. Causes of those changes
   c. Any significant changes emerged from those changes
   d. Main results of emergent projects
e. Goals of emergent projects
f. Challenges in managing emergent projects

3.9 The process of analysis

After we collected our interview data, we needed to make summaries for our interviews before starting to analyze the results. Firstly, we made the summaries and included the profiles of each company as we found the information from company websites. As it is stated earlier, the appropriate analysis method for our research is template analysis. Subsequently, we developed categories for our template analysis based on the themes of our interview questions. We had four themes in our interview questions and these are: the context of company context, the context of interviewee, distinct characteristics and strategic impacts of emergent projects. The summaries of each interview were based on the template analysis. The next thing we did was trying to find out any emerging pattern in all the interview data through a matrix we developed (See Appendix II). The matrix has the companies on the columns and the interview questions in the rows. The common choices they make in the interview questions and the similar responses they gave were taken as the pattern. As the major result of the research, we analyzed the emerged pattern at the end of the analysis chapter.

3.10 Credibility Criteria

According to Saunders et al (2007, p. 317-319), issues related with the data quality of semi-structured interviews are reliability, forms of bias, validity and generalisability. Bryman and Bell (2003) added ethical issues as another measure of credibility. Combining the issues of reliability and forms of bias together, we will look at each of the above criteria as follows.

3.10.1 Reliability

“Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings.” (Saunders et al, 2007, p. 149) There are four threats to reliability which are subject or participant error, subject or participant bias, observer error, and observer bias (Saunders et al, 2007). We don’t have any reason to believe that the respondents might have made any error or have any bias on the issues we discussed with them because most of them were well experienced and voluntarily involved. Regarding observer error, we tried to lessen any possible error by properly structuring our interview questions and analysis tools. Moreover, we needed to exchange a number of emails with some of our respondents to get more relevant and clarified responses. As we were doing so, we were more able to avoid any biases that would have been created in interpreting their brief and sometimes incomplete initial responses.
3.10.2 Validity

The validity of findings from qualitatively based interview studies “refers to the extent to which the researcher gains access to their participants’ knowledge and experience, and is able to infer a meaning that the participant intended from the language that was used by this person” (Saunders et al, 2007, p. 319). Most of our respondents we had access to were well experienced and knowledgeable practitioners in project management which made our study as valid as it should be. Hence, validity in our study is achieved by getting access to the best informants. To the best of our knowledge, we did not give any other meaning to the responses of our interviewees different than what they intended as they were responding to our interview questions. Moreover, we used a credible approach to select and access the best possible persons for our interviews. However, we can not generalize our results as “qualitative research using semi-structured or in-depth interviews will not be able to be used to make generalizations about the entire population where this is based on a small and unrepresentative number of cases” (Saunders, 2007, p. 319) which is true in our study.

3.10.3 Ethical issue

Ethical issues consider two major aspects (Bryman and Bell, 2003). Firstly, it is about the way we treat the people who are involved in the research. Secondly, it is about the activities involved between the respondents and researchers. Starting from the selection of research area to the research design and data collection, ethical issues are always essential. Diener and Crandall\(^2\) (1978, p. 132) stated that there are four subjects covered in the ethical principle and these are: “Harm of participants, lack of consent, invasion of privacy and deception”. In our study, we allowed the respondents to be anonymous and appealed for their voluntary involvement in the research. The interviewees were informed to decide on the optional questions if there is any confidential concern.

We tried hard to gather as much information as possible. However, the size of the answer is determined by the respondent. How deep and how far they would answer is totally dependent on the participants’ volition. We needed to assure our respondents that there will not be any trace back to their companies and to any of them. However, none of our respondents raised the issue of anonymity and confidentiality in the interview. Taking the kind and size of information we got from them into account, especially from the two car companies from Germany and Sweden, they gave us the liberty of deciding whether to make them anonymous or not. We, therefore, decided to make them distinguished and did not find it necessary to make their companies anonymous in our study.

\(^2\)Diener and Crandall (1978) - extract from Bryman and Bell (2003), p.132
4. Interview summary and Analysis of findings

In the present chapter, we will be looking first at each of the responses we got from the companies we interviewed. The analysis of each response is based on the template we devised earlier in the methodology chapter. Using an analysis matrix (Appendix II), we tried to figure out a pattern among all the responses we received and the discussion of analysis findings at end of the chapter describes the pattern we found out.

4.1 Daimler AG in Berlin, Germany

4.1.1 Company Profile

Daimler AG is a German manufacturer of automobiles, motor vehicles, and engines, which dates back more than a century. The rich history of Daimler AG has its roots in the early experimentation with the use of the internal combustion engine by three men: Carl Benz, Gottlieb Daimler, and William Maybach. Benz, working alone, and Daimler and Maybach, working together, the two shops separated by a mere sixty miles, in the late 1880s simultaneously laid the foundation of what would become the German automotive industry.

Daimler AG with its businesses Mercedes-Benz Cars, Daimler Trucks, Daimler Financial Services, Mercedes-Benz Vans and Daimler Buses, is a globally leading producer of premium passenger cars and the largest manufacturer of commercial vehicles in the world. The Daimler Financial Services division has a broad offering of financial services, including vehicle financing, leasing, insurance and fleet management.

Daimler sells its products in nearly all the countries of the world and has production facilities on five continents. The company’s founders, Gottlieb Daimler and Carl Benz, continued to make automotive history following their invention of the automobile in 1886. As an automotive pioneer, Daimler and its employees willingly accept an obligation to act responsibly towards society and the environment and to shape the future of safe and sustainable mobility with groundbreaking technologies and high-quality products. The current brand portfolio includes the world’s most valuable automobile brand, Mercedes-Benz, smart, Mercedes-AMG, Maybach, Freightliner, Mitsubishi Fuso, Sterling, Western Star, Detroit Diesel, Setra, Orion, and Thomas Built Buses. Daimler is an automotive Group with a commitment to excellence, and aims to achieve sustainable growth and industry-leading profitability.

Daimler is owned by European, U.S. and other international investors. Slightly less than one billion shares (April 30, 2008) are circulating. In 2007, automotive sales were 2.1 million units. The company has manufacturing facilities in 17 countries. The number of employees was 272,382 at the end of the year 2007. The Mercedes-Benz Berlin plant, located in the southern part of the German capital, is Daimler's oldest plant. The plant produces engines for the Maybach and Mercedes-Benz brands.
Product development, design and production of components and parts are also carried out at the Berlin location. About 150 young people complete their technical training at the plant each year.

4.1.2 Interview findings

Each of our respondents from the Berlin plant of Daimler AG has some different points on the questions of our interview. It must be due to the fact that they are from different divisions and departments of the company unlike what we did in Volvo Trucks in Umeå. Therefore, we will deal with each of the four responses we have received which will help us to have a better perspective on the company with regard to our research quest.

1. The first project manager we contacted was from an IT management division. He is an IT business consultant for customer relationship management in the automotive with 9 years of working experience. He led a project with 12 people maximum and was a member of a project with a team made of more than 100 people. His main responsibility was to deliver complete software solutions and IT services. He told us that new project initiatives and ideas come from unexpected requests from the internal customer divisions, legal requests, maintenance or lifecycle requests. Generally, projects in his division are categorized on the basis of their scale and complexity. He said they don’t usually come across emergent projects. But when they happen to have them, they are evaluated with regard to their strategic impact, sales potential and enabling potential for new business and potential to excel competitors as any other projects.

The key issues involved in his emergent projects are
- resource allocation in terms of budget, staff or time,
- Coordination among departments,
- Communication issues in the project team or within organization and
- The interest of the management body (clear decision has to be made by the management board before emergent project starts), well-defined scope and management expectation

He admitted that emergent projects bring both internal and external new opportunities. However, these projects have negative effect on other projects. Suddenly, emergent projects become the only projects that need more focus and quality issues on other projects will be ignored.

There are clear rules for initiating, starting and monitoring any projects in their division. Before any project starts, the size and budget of the project must be presented together with its respective business case. This is equally true for emergent projects. Consequently, the only point he sees projects to be emergent is the way they become to be so significant to the company in an abrupt manner. He said the only
reason why emergent projects are justified for their abrupt entrance to their profile is because they are timely and strategic. But still, they will be treated as any other project once they are started.

He further noticed that the company made some changes in the past few years to increase its competitive strength. These changes are like:

- Introducing new products and services to the clients
- Expanding the market rapidly, such as set up new department or new office in a new market
- Change in the process or methodology of operation management

These changes were caused by different factors such as –

- Learning from past experience
- Legal and environmental issues
- Top managerial instruction
- Repositioning their product or services
- Threat from other competitors

Emergent projects arose from these changes. More specifically, their division took the responsibility of delivering updated software solutions both for the internal and external customers as the above changes in the company have made some drastic shift in the way the company relates with its customers.

2. Our second respondent is an IT project manager with 6 ½ years of working experience in the same IT management division as our first respondent. He led projects with 2 – 4 team members. His responsibility is providing different applications which support the internal process of the company. Currently, he is working on an application which manages the purchasing process of customers.

His projects come from regular meeting with managers or direct instruction from top managers and unexpected request from clients. He categorizes his projects according to their scale and complexity. Though he clearly mentioned that projects which require an immediate action with unexpected occurrence like emergent projects are rare in the IT division, he did not hesitate to tell us that he manages, though rarely, projects of that sort. There is a committee which decides on projects which are defined to be “big” projects regarding their budget. Moreover, there is a defined budget scale which separates smaller projects from the bigger ones.

As he mentioned, the key issues in managing emergent projects are:

- Resource allocation in terms of budget, staff or time
- Communication with project team or within organization
Communication with clients
Clearly defined scope of the project

It is very important for them to have an approved scope, budget, staff and timeline of the project. This approval must be done by all the relevant project stakeholders who could be either the clients of the project or the budget and staff “suppliers” of the project.

Due to the occurrence of emergent projects, other projects have been cancelled or postponed, staffs reallocated and the budget need of other projects have been affected because of the higher budget need of the emergent projects. But these projects have brought new opportunities to the company in terms of process improvement both for the internal and external customers. Regarding company regulation about emergent projects, the company has a regulation for all kinds of projects whether they are “emergent” or not which has a clear approval and project management process. The reporting process for projects is based on the following factors:

- Scope
- Time
- Risk
- Communication
- Integration
- Human Resource
- Quality
- Procurement
- Cost

He explicitly told us that he did not see any difference between working on emergent projects and other normal projects. He said, “There is no difference between them regarding the project management approach. All projects have to be managed in the same way. The only difference might be that emergent projects have a higher priority and they capture a higher managerial attention.”

On the issues of strategy, he identified for us two changes made by the company in the past few years. The first change the company made, as he observed, is introducing new products and services to the clients and the other one is related with changes made on the process of operation management. These changes were ensued after the lessons the company claimed to have gotten from experience and the intervention of top management. These changes gave birth to several projects which were started to standardize the software application landscape of all the branches of the company.

As he explained further, his emergent projects were focused on process standardization as his other normal projects. It is the timing which makes the emergent projects a bit different than the others. Managing the inter-dependencies of the emergent projects with other normal projects regarding time, scope and resources was the major challenge these emergent projects posed. And finally, the main results of these emergent projects had impacts on shareholders, on project teams, on internal
operations, and on the competitive strength of the company.

3. The third respondent we interviewed is a senior project manager who is responsible for global project management standards within Daimler financial services and is in the global project manager pool of the company. He has worked for over five years in the department of project management and division of business processes and projects. He led project teams with the number of members as big as 350. He is mainly engaged in company start-ups, global IT system replacements, major transformational projects, and worldwide company renaming after the de-merger from Chrysler.

According to him, project ideas come from an annual strategy process in his department or from top management and sponsors. Once projects are approved to be started, they are categorized according to their scale on the basis of their size and budget. Additionally, categorization of their projects is based on geographic factors (local/regional/global), factors of value chain process (front, middle, back office), and on compliance/tax/legal issues. He did not hesitate to tell us that most of his projects in the department are more like emergent projects. He said “I would consider mainstream projects being mainly locally driven IT-replacement projects or the like. Our organization, however, has started various regional programs for the last 3 years aiming at re-engineering the business model.” These re-engineering programs started as emergent projects which were not part of the mainstream projects the department had. Most of the projects, including emergent projects, in his department take longer than one year due to their size, scope and complexity. We are told that it is the line management and/or the respective project boards which decide on emergent projects.

There are a number of key issues he found to be related with managing emergent projects and these are:

- Resource allocation in terms of budget, staff or time
- Coordination in terms of cross department or internal function
- Internal report process
- Communication with project team or within organization
- Prioritization of projects, as we start too many projects and hardly stop any despite changes to the objectives, strategy or scope

As he told us, he found no big difference between emergent projects and other normal projects. However, these emergent projects have impacts on other projects and these are related with staff reallocation and need of more budget which will affect the budget allocation of other projects. As the other cases in the same company, these projects brought new opportunities for both the internal and external customers. Regarding the company regulation on emergent projects, he said that the approval process differs depending on budget size but there is no any specific reporting process.
for emergent projects.

The changes the company made in the last few years to excel its competitors were by expanding the market and changing the process of the operation management. Those changes were instigated by the legal and environmental issues, threat from competitors and the overall rapid changes in the market environment. These changes in the company resulted in three regional strategic programs aiming at changing the business model from locally isolated operations to regional shared service operations, changing the product and service offerings and back-office changes.

The strategic impacts of the emergent projects can be seen more in their general stated goals, challenges and results achieved. In one of the emergent projects he recently managed, he said he was dealing with the standardization of products, processes and IT systems in all their 40 different country entities aiming at significantly reducing operating costs and enlarging the product offerings worldwide. The challenges were, on the one hand, the technical complexities of the IT process itself and, on the other hand, the political opposition from the different regional offices against the driven approach from the headquarter office. Despite these challenges, these projects have managed to bring positive impacts on project teams, on internal operation and on the competitive strength of the company.

4. Our fourth respondent is another project manager in the company with 16 years of working experience in the company. His responsibility is mainly on the reclamation management which is related with used cars and on business analysis. He takes steps for improvements and innovations. He had 100 people in one of his project team.

He gets new project ideas from different sources. Most of them are from right inside the company like –
- From project meeting
- From regular meeting with colleagues
- From regular meeting with managers
- Direct instruction from manager

But the other two are from the external environment and these are the unexpected requests from clients and indirect forces coming from the products/services of competitors. He manages around 15 projects more similar with the description of emergent projects. It is the reclamation Chief Information Officer (CIO) who decides on all projects including emergent projects. Regarding the key issues involved in managing emergent projects, he mentioned about –

- Resource allocation in terms of staff and time
- Coordination in terms of cross department or internal function
- Communication with project team or within organization
- Communication with clients

Though these projects bring, as all the others we mentioned before, both external and internal new opportunities, it was not possible to avoid their effect on other projects. Staff reallocation and less quality concern for other projects were the unavoidable occurrences after emergent projects surfaced in his office. The company regulation for emergent projects is based on leaning system and different methods for reclamation and innovation. The leaning system is also used for the reporting process of emergent projects together with a standard report and best practice available. And the only difference he could see about emergent projects is the pressing need to finish them on time.

What our last project manager noticed in his company to have made changes in the last few years is related with introducing new products/services to the clients, increasing new business units, change in the process or methodology of operation management, and management system change from function-orientated to project-based orientated operation. These changes were caused by legal and environmental issues, top managerial instruction, repositioning their product or services, and threat from other competitors. However, he could not trace any project which came out of these changes made by the company. The goals and challenges of the emergent projects are surrounding on the issues of time, cost and budget. The results gotten from these projects had impact on project teams, such as developing the improving work efficiency, on internal operation, such as change in the managerial process or increasing the core competence of the company.

4.2 Volvo Trucks cab plant in Umeå, Northern Sweden

4.2.1 Company profile

In 1929, the company started life as a furniture manufacturer, but just a year later the production of drivers’ cabs was in full swing. Initially, all the cabs were made of wood, but, in 1935, the first steps were taken towards what would eventually become the world’s first steel cab. At the end of the 1930s, Gösta Nyström built the plant that has now developed to become Volvo Trucks. Rational production with the highest quality has been the over-riding theme since the cab plant was first established both before and after Volvo took it over in 1964.

Umeå is now Volvo Trucks’ sole producer of truck cabs in Europe. Its principal market is Europe and the Umeå Plant’s direct customers are the Volvo Trucks assembly plants in Ghent (Belgium) and Göteborg (Sweden). The production facility in Umeå is one of the world’s most modern cab plants, with advanced production technology based on robots and computerised monitoring systems. In many ways, the current high technological level at the Umeå Plant is unique and has frequently set the standard within Swedish industry.
Volvo Trucks in Umeå is the largest engineering industry in northern Sweden, with some 2,400 employees. The production process is steered by customer orders and comprises sheet-metal working (pressing and parts production), cab assembly (three robot lines), surface treatment (painting) and fitting (interior fittings and equipment). Every cab is unique and complies in every detail with the customer’s individual requirements. The cabs are controlled by their chassis numbers and are delivered to the assembly plants at the right time, with the right quality and in the right sequence.

During the past five to six years, more than SEK 1 billion has been invested in the cab plant in Umeå. The principal aim has been to increase capacity from around 40,000 cabs a year to more than 51,000. However, investments in new production equipment have also been included. During the past decade, large-scale investments have been made with the aim of improving both the external and internal environment. The Umeå Plant has focused primarily on new paint material (two of the three coats of paint are water based) new application equipment and advanced purification technology using zeolite rotors. In addition, the Umeå Plant reduced emissions into the air by 85 per cent during the 1990s and it currently has the world’s cleanest paintshop when it comes to the emission of solvents into the air.

At the present time, Volvo can offer its customers some 50 standard colours direct from the plant. With regard to the very strong global demand on heavy trucks, there is a need to increase the production volumes at Volvo Trucks world-wide, including the Umeå operation. The company will investigate the possibility to increase the capacity within the framework of the new operating licence. The new adjusted permit to expand to 66,000 cabs per year was granted in April 2007.

### 4.2.2 Interview Findings

We had the privilege of contacting four IT project managers in the Volvo Trucks cab plant in Umeå. All of them are from a system development division of the company. Their main responsibility is to deliver and provide the company with software solutions. Their working experience is in the range of 2-10 years. According to the kind of project they have and their experience, the number people they have in their project team differs. The smallest project team one of them has is made of four people and it highest the other one had is 22. Were it different responses, it would have been better to treat each of their replies separately. However, their responses are almost the same and we will have to combine their replies. The following points we made on the distinctive characteristics of emergent projects and the strategic impact of these projects on organizations is a summarized description of these four project managers in Volvo Trucks cab plant in Umeå.

#### Distinct characteristics of emergent projects

Henok Minas and Lang Hua Chiu
Before starting to discuss about the nature of emergent projects in the company, it will be helpful to see where their projects usually arise from and how they categorize their projects. It would give us an overview of the kind of projects they are managing and how they are managing them in their division of the company.

As to our request about where they usually find new project ideas, they have responded that most of their projects are all related with the business requests of customers to the company. When the company starts a business project and needs an IT solution, they will start to be engaged in an IT project. They categorize their projects on the basis of project scales, for example, in terms of the budget size. Subsequently, they have IT projects categorized in terms of their scale once they are requested and approved to be a software solution to the related business of the company. They have admitted that some of their projects have the nature of emergent projects as we defined it to them but only at the starting stage of the projects. After a while, those projects with an emergent nature will sink into those kinds of normal projects they always have. And it is the portfolio manager who makes key decisions on those emergent projects.

The most recurrent key issue in managing their emergent projects is that the emergent projects have this tendency of changing their routine operation. They take them out of their regular work flow. For example, one of the effects they have witnessed to is emergent projects bring about the reallocation of staff so that the pressing needs of the projects can be met effectively and efficiently. Besides, the company has seen some new opportunities brought about by emergent projects. Some of them are internal to the company such as quality and process improvement and the other opportunities are external like increment of profit and competitiveness. However, there is no any special company regulation or reporting process for emergent projects in the company. Emergent projects will be treated as any other normal projects. Whenever this sort of project is in progress, reports will be taken to the steering committee on a regular basis. Regarding challenges in managing these sorts of projects, they mentioned first about the disruption of their routine operation but the hardest one is in the process of staff reallocation. Unwillingness to get out of their comfort zone can easily be identified as the cause for both of the aforementioned challenges project managers are facing in managing emergent projects.

**Strategic impact of emergent projects**

These project managers have noticed that the company did make some changes in the past few years to increase its competition in the market of truck industry. These changes are related with the process or methodology of operation management. These changes are caused by learning through experience during mainly the past success of the company and its struggle to be more quality based manufacturer of Volvo truck cabs. The project managers believe that these changes obviously have caused to the
emergence of some projects although what they are more aware of is that the company got more valuable lessons along the way as to how to make the company more competitive in its market.

The major strategic impact of emergent projects is their impact on the internal operation of the company. The software solutions they delivered in their projects brought changes in the managerial process and increased their core competence of the company. One common point all our respondents from the company made is that projects with untypical or irregular nature comes rarely. When it comes, it disrupts their routine work flow and staff reallocation usually is needed. But once the project is started, it will be handled in a similar fashion as any other project in the company.

4.3 Schneeberger AG

4.3.1 Company profile

Schneeberger offers a linear motion control technology service to the blue-chip clients around the world. The global support to OEM (Original Equipment Manufacturing) clients mainly focuses on the solar, semi-conductor, electronic industries, medical technology tools and machinery. In order to keep the leading position in the industry, the company has consistently updated innovative products and solutions. Its manufacturing sites basically locate in Switzerland and Germany. There are distributors and sales office in Switzerland, Germany, Italy, Czech Republic, India, United States, Japan and China. The global operation offices aim to bring strong sales and service support to all major customers.

Customer-oriented service is emphasized in the strategy of the company. Reliable communications on on-time delivery and consistency of quality are essential requirements of the business. The major goal is to benefit all customers as a close partner to their success. The company puts some efforts to increase their logistic capabilities and local support in order to ensure the achievement of total quality. Mainly, they have developed core competences in the expertise of manufacturing and applications. Constant improvement in reducing cost and investing on research and development is strengthening its competition in the market.

Schneeberger is mainly an OEM partner to the clients. There are six major business units in the organisation. The sales teams offer both standard and customized services to the clients. Our interviewee in the company is a project manager from the Sales department in Switzerland. The product lines he manages are elements of linear bearings that include Recirculating Units, Slides, minirails and minimodules. His responsibility is a combination of coordinating resources and project team, reporting the market situation, providing customer information and project work, offering technical support and training for the Sales dep. or to the clients for Asia markets. He has two years of working experience in the company. Basically, he does not have much physical contact with project team. The team members are working on different
projects. He has to coordinate project works across all the functions in the company. Sometimes, he also has to manage the partnerships the company has. For example, some companies offer a precise calculation of engineering or support data analysis in the market. Furthermore, working with the clients closely is important in each phase of the project. He described that “We initiate some projects together with our clients. Additionally, I manage some work of the product design and a lot of reports as part of my routine task.”

4.3.2 Interview findings

Distinct characteristics of emergent projects

After few times of contact through email, we arranged a face-to-face interview with the project manager in Switzerland. The interview took 1 hour and 15 minutes. The interview started with the general topic regarding project categorization. In his company, projects are separated according to products as different business units. The project management teams do not define any project category in the organisation. Project portfolio management is not mentioned in the conversation. New project ideas are mainly requested from the clients or are initiated in the project meeting. We discussed more about the projects initiated by clients. Generally, project managers propose the updated products and services in the meeting with clients. The requirements of new projects depend on the customers demand, the results of the negotiation between both partners and the production capability of the company.

As mentioned before, Schneeberger mainly offers OEM services to the clients. However, it is not easy to define the edge between OEM and customized services. “I would say emergent situations are part of the nature of OEM design.” The project request is basically related to the minimum quantity with profit concern. Most of the time, profit is the prior consideration in the project initialization phase. But keeping potential business with the client is more important. In that case, the company will consider it as a special project demand with less concern on the profit. The project activity is explained as an infrastructure of the future business which is related with the innovative principle of the company strategy.

The project manager told us that emergent projects are not clearly defined in his responsibility. He said, “In my case, the working situation has to be very flexible. I sometimes modify standard products only in few days and handling many other small requests are part of my responsibility. I do not consider these responsibilities to be project work. However, if the scale of the demand is bigger and if it takes around half a year to 2 years, the work will become more like project-orientated activity.” He has six years of experience on emergent projects so far. They are mostly initiated by clients and sales marketing team. Some set of projects serve the same clients. The possible situation is that when the project team runs a project, there may be some additional requests which are not expected in advance. If the request is highly correlated with profit, customer relation or competition, it will become an emergent project.
The emergent projects he managed have an innovative nature. He explained, “I even do not know how the final product will look like. We work together with the clients most of the time on the product prototype. We have to work closely with each other, learn from the experience of both parties in regard to product development and manage a large level of uncertainty.” When he talked about the criteria of emergent project in the decision making process, the three aspects he mentioned are listed below:

1. The amount of order – If the amount is too small, the company may decide not to take the request from clients. Meeting the minimum order is one of the important criteria.

2. The technical ability – If it is not possible to achieve the technology, the company would reconsider the request. For example, there are a lot of works related to the prototype development. Both the company and the clients have to invest time, technology development to solve the technical problem together. If the project team has seen a problem or limitation from the technical point of view, they would suggest the clients to reconsider their requirements.

3. Customer relationship – as a customer-oriented company, customer relationship management is one of the key issues of all project works.

No matter what type of projects, all new projects have to be reviewed in a regular weekly meeting before they are selected into the project portfolio. The key persons in the meeting are head of the profit centre unit, the Sale and Marketing director and the head of the logistic office. The head of the logistic office is also responsible for examining the work of the manufacturing department. The task of the project manager is to prepare the report and suggestion to the department head and Sales and Marketing director. The analysis of market information and the demand of clients are important factors to the decision making process.

When our interviewee was managing the emergent projects, he paid much attention on resource allocation, coordination and communication. He said, “I have to coordinate the resource across departments. In the meantime, I have to know when I need support from other people.” In his opinion, flexibility was important to manage the projects outside of the plan. “You can plan a lot, but these kinds of projects always tend to shift in many ways. We try to control the quality. The company invests a lot of budget and resources in product development. Minimizing the possible risk is my responsibility during each project phase. We try hard to ensure the optimal result such as profit and enhancement of customer relationship in this kind of project. When the schedule becomes to be a constraint, working overtime will be necessary to deliver the best result of the project.”

In the past experience of our respondent, emergent projects have brought obvious effects on other projects. The reason is that the emergent project often required additional support of resources in terms of time, budget or man-power. Therefore, regarding the issues of scheduling or cost control, there could be additional work load.
all the time. Moreover, emergent projects bring new business opportunities. As we discussed it earlier, Schneeberger develops innovative ability with its business partners. Through the learning curve of the projects, the company has enhanced its competitive edge. Due to the criterion on profit in the project selection process, most emergent projects contribute additional cash flow to the organisation. Another advantage achieved from emergent projects is the gain of knowledge. The interviewee claimed, “Through the emergent projects, we normally develop unique know-how, understand more about the quality control and work efficiency. Of course, the communication, negotiation and coordination should improve as well.” Thus, in this case, the organisation gets quality improvement, skills enhancement and develops know-how from emergent projects.

**Strategic impact of emergent projects**

Within almost 2 years of working experience in the company, the project manager indicated some strategic changes the company has done. The most impressive change the company went through is through the organizational learning in the partnership of projects with a key client. This client requested new projects based on the previous specification achieved by the cooperation of both parties. “Customers are the driving force to the company innovation”, he said. The request from the client emerged in the working process of a previous project. Undoubtedly, investment in research and development is the key success factor of Schneeberger. However, the common understanding and trust gained from all kind of projects had ensured the future partnership with this important customer.

The interviewee further explained the valuable experience of project success with this client by saying, “Working with them made our company become the only supplier of this leading company because of the unique ability we established together for the special component they need. The reason is that we invest a lot of research and development resources to the client. Through all project phases, both of us have built up new technology and know-how.” We can see there is a continuous learning spiral in the partnership that has strengthened the core competence of the company. Therefore, project learning has possibly influenced the organizational changes. The most important issue is that project learning has consistently pushed the innovative ability of the company.

The other key factor which instigated organizational change in the company is the teamwork suggested by the project manager earlier. The strong support of each team member and the department heads has delivered outstanding results. On the other hand, the project manager told us that there is no “pure emergent project”. He highlighted that in most of the cases, new technology requirement from clients brought positive input on their products and services. It is a win-win situation for the company and its clients.
Currently, this project manager is still working with the client we discussed before. The scale and technology development make this cooperation the most visible project work he has ever handled. This project did not just emerge. It aims to develop new technology based on the previous successful specifications. When they coordinated the previous project, the additional request resulted in this emergent project. After the company made some analysis as to the extra profit and gain of technical development in the opportunity, the project had been approved. The major challenge is that both the project team and the client cannot even guarantee if the new technology development will really work. “We do not have a fixed timeframe for the innovation process for this project. My company and the clients keep a lot on-side testing.” The project team defined the flexibility, risk management and extra investment as solutions when they manage this project. Since there is flexibility on the time frame, it’s crucial to ensure the profit in the short-term. Furthermore, the feasibility study which analyzes all the limitation of the requirement from clients is communicated all the time.

In the developing process of the partnership, the project team faced many challenges in terms of time, project sponsorship and research and development (R&D) ability. Actually, many companies would like to have partnership with this important client. However, after the bidding process, most of the companies stepped back. The reason was because the tough requirement of the specification could hardly be fulfilled. The bidders must understand the bottom line in terms of time, R&D budget and the risk of project failure. Considering the highly innovative nature of the industry, the update work on the specification is speeding up. Some product development project is unable to work based on the previous design. When clients request for higher performance products or services, the requirements may demand 100% re-design process for Schneeberger. Most of the time, project manager has to communicate the difference between the expectation of the clients and the technical limitation.

Since the company is investing great amount of innovative ability, the emergent projects helped to increase the revenue of the company and to attract new potential businesses. The improvement of project management skills and technical ability is the other benefit gained from the project learning. As we analyzed, the project work increased the unique know-how in linear motion technology that can be described as the enhancement of core competence. Therefore, the total competitive edge achieved in the process will consolidate the organization in the market. Besides, the customer relationship management is always a major concern of the business. The company has established strong trust and partnership with the clients through the projects.”Comparing with the other competitors in the market, we always offer more flexibility when we work with our clients”, said our respondent.

Overall, the project manager concluded that there are two major goals of the emergent project he is managing now. Firstly, it is to satisfy the customer with an innovative product. Secondly, it is to generate revenue. He re-emphasized the support and coordination between his company and the clients in the project. He suggested that open communication with clients is essential for all the projects. The company aims to
offer reliable service in terms of time and quality. Although prioritization of work usually has impact on the projects in the portfolio, customer relationship and capturing potential projects are always what they have to keep in mind. The close teamwork has delivered positive outcome and ensured to preserve the skill learned in the projects within the organization. The competence of the company is continuing to develop no matter the project team or project manager is changed.

4.4 Integrated Silicon Solution, Inc

4.4.1 Company profile

Integrated Silicon Solution, Inc (ISSI) was incorporated in 1988. The company offers integration solution in design, development and marketing of memory chips products for digital consumer electronics, mobile communications, automotive electronics and medical electronics. SRAM, DRAM, EEPROM, Smart cards and Wafer level memory are the main product lines of the company. The company is headquartered in California with international offices in China, Europe, India, Japan, Korea, Singapore, and Taiwan. According to its annual financial report, the company generated 245.4 million in US dollar in 2007. Reviewing the electronic components and semiconductor manufacturing industry, the direct competitors of the company in the global market are Cypress Semiconductor, Integrated Device Technology and Samsung Electronics. Most clients they serve internationally are key players in the downstream, such as Sony, Cisco, Ericsson, Motorola, Nokia, Bose, Philips, Siemens, General Electronics...etc. Therefore, the demand volumes of these clients normally are essential the information for the company to forecast the trend of memory chips industry.

The company serves integrated memory solutions to their target markets which were defined into two segments. First, company targets on the high quantity demand markets with low cost, such as consumer electronics industry, communication industry. The strategy is to offer stable supply with competitive price and efficient product performance. On the other hand, ISSI has noticed the market trend of sophisticated products. They offer high-level memory chips targeting on automotive, industrial and medical electronic industries. The strategy here is to keep updating the memory content, managing large amount of data from the development experience in order to enhance the total performance of memory chip solutions. ISSI outsourced the manufacturing process to Asia and some American foundries. The company makes effort on in-house research and development as well as partnership of technology development with the key wafer foundries.

3 Wafer Foundry: The manufacture of wafer. Wafer is a thin, round slice of semiconductor material, typically silicon, from which microchips are made. Silicon is processed into large cylindrical ingots, sliced into ultra-thin wafers and then implanted with transistors before being cut into smaller semiconductor chips. [http://www.webopedia.com/TERM/w/wafer.html](http://www.webopedia.com/TERM/w/wafer.html)
We interviewed the Product Manager of DRAM (Dynamic Random Access Memory) from DRAM marketing department in Taiwan. He has worked 7 years in the company. DRAM is a kind of semiconductor component used widely in all electronic devices. The major clients he manages are Cisco, SONY, Phillips, and Panasonic. There are 3 team members in his project team. According to his explanation, the product segment he handles now is based on the commodity specification. Therefore, the cost and price are always major issues when he carries out projects.

4.4.2 Interview findings

Distinct characteristics of emergent projects

In an interview which lasted for an hour through the MSN phone, our respondent started to tell us that there is not a clear project portfolio management system in the organisation. Basically, the company categorizes projects according to product lines. The new project requirements are usually requested by vendors or directly instructed by top management. Looking back his seven years of working experience with the company, the project manager mentioned that emergent projects are rare in the electronic components and semiconductor manufacturing industry. The possibility of emergent project depends on the market situation. For example, the request is from vendors who are from upstream. The key criteria to decide on the selection of emergent projects are based on the analysis of revenue, sales amount and profit percentage. Besides, the company has to consider the relationship with vendors. In the industry, vendors are wafer foundries who play very important role of product innovation. In general, these companies invest huge amount of R&D that create high bias to change the specification of the products. If they change the specification, they may have to build up a new factory. Any change of specification takes at least 6 months to a year. It is a long, expensive process for the competitive electronics markets. Therefore, the sales strategy of project team has to follow the product map offered by vendors. In fact, the bargaining power of the company is very low with vendors due to the high R&D cost as it is a general situation in the industry.

Currently, he has one emergent project requested by the main vendor. The major issues he is confronting right now are the resource allocation of the staffs, managing the effect on other projects, keeping communication with the project team and with clients. Prioritization of projects is always one of the challenges when the company accepts the selection of emergent project. The acceptance of emergent project may cause the termination or rescheduling of projects which are already in the main stream project portfolio. Relationship with the customer is especially important when the priority of projects change. “Because all clients consider themselves to be the most important sales account of my team, I have to explain why we are re-arranging the priority of projects” said our respondent. Trying to maintain the customer relationship affects the service and long-term business opportunity of the sales and marketing department. The overall goal of the project teams is to increase the revenue of the company. Therefore, the emergent project does not overlap with the long-term
product lines. In the meantime, he has to ensure that the emergent project will bring positive result such as extra cash flow in a shorter time or create better bargain power with vendors for the next business. Thus, there must be some opportunities brought by emergent project in his case.

**Strategic impact of emergent projects**

Obviously, profit and revenue increment is the major goal of emergent project. The project manager has to optimize the final result of the project in an efficient manner. Reducing cost is another issue emergent projects are said to bring. In short, the emergent project is not a major resource of cash flow. Once the company decides to start the emergent project, the extra income should be guaranteed. All the projects are decided after meeting with CEO. The reporting process of the emergent project is simply between the CEO and the project manager. Project managers analyze and support the CEO as he gives the final decision. The interviewee further commented on the difference he has seen between emergent projects and normal projects. He noticed that there would be more pressure from top managers when he manages the emergent project. Normally, emergent projects have to be finished in a shorter time frame in order to reduce the risk. Another difference is the profit of emergent projects could be lower than normal projects. It is because customers will have bigger price negotiation power when the sales team promotes the product of emergent projects in order to achieve the amount of the target sales in its shorter project life cycle. The uncertainty is one issue happened in the emergent project. As the respondent said, “It is easier to control the cost and schedule of normal projects.”

The most visible change the company went through in the past few years was the implementation of new ERP system. The other influential issue in the past years was the top management decided new marketing strategy in April, 2004. Due to the slump of global economic situation for many years, ISSI considered the economic trend of M-shape society will impact the demand of memory chips. Therefore, the company differentiated the products into two major segments. The high-end products target on automobile, medical, or industrial application. On the other side, ISSI applied cost down strategy for low-end product lines. After four years, the growth of their business has proved that the company made a right decision to increase the revenue steadily year after year. The changes mentioned above are mainly related to the environmental issue regarding the macro economic situation as well as threat from direct competitor and the decision from top management.

The ERP system has obviously increased the competition and work efficiency. The marketing strategy of two different price-segments has brought new business opportunities as well. Currently, he has a new sales project resulted from the requirement of the major vendor. Due to the decreasing market demand of semi-

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conductor products, the vendor is making a pressure on the inventory. In order to keep the long term relationship, ISSI need to have better cost materials to compete with other competitors. As a result, the company arranged the new sales strategy according to the vendors request. As we discussed before, the bargaining power of these companies with vendors in the industry is generally weak. However, the three months sales project will offer ISSI better bargaining power to the next business with the vendor. The respondent explained about how the project is going to increase the competitive power of the company in the market. He said, “We solve the problems of vendors. There will be better chance to negotiate the cost with them next time. Thus, our products will have higher competition in the sales price comparing with other competitors.”

The project manager is based in the sales and marketing department. Therefore, we can see his viewpoints are more related to how the project impacts the business in terms of revenue and the benefit to shareholders. The emergent project he is managing now delivers three possible impacts. Firstly, it generates additional revenue, creating potential businesses in the future. The services of the upstream supplier will be improved because the emergent project supports the inventory sales. Secondly, cost can be reduced due to the closer relationship with vendors. Finally, the sales of additional material would increase the market share of the company quickly. Actually, project managers have to be sensitive to the ways market changes. Regarding price promotion, the issue of emergent project is sensitive which would have impact on the price of the next deal with the same clients. Referring two target segmentations, revenue is mainly generated from low-end price segmentation. On the other side, in high-end market, the profit is higher but the quantity is small. As a project manager of the low-end market products, he has to maximize the sales amount in each deal. The emergent projects usually require extra human resource. Therefore, the top manager would monitor the project performance with the sales revenue directly.

The goals of the emergent project emphasize more on the maintenance of the long term relationship with the supplier, gathering better material cost in the future and additional revenue or potential joint partnership with vendors. In order to achieve the goals just mentioned, the interviewee indicated that the project team has to announce the new sales strategy to all the distribution centres. In addition, an aggressive price strategy for emergent sales project is necessary so that the emergent project is able to generate additional income in a short period.

The challenges of emergent projects were discussed at the end of interview. The project manager stated, “When the special product offer is finished, the customers always want to keep the aggressive price. For example, now once I sell out the product promoted in the emergent project, the same product will not be supplied. My clients have to choose other products as their cost material. They would look for a lower price as they get in our emergent project. How to convince them to purchase another product from our company is going to be my headache when I finish this project.” He has to be sensitive when he negotiates the next deal with the same clients.
who purchased the product of the emergent project. Relationship with vendors, clients and making revenue are always key factors when he aligns the goal of emergent projects to the overall strategy of the company.

4.5 Novatek Taiwan Ltd.

4.5.1 Company profile

Novatek Taiwan Ltd. is an IC design company in the semiconductor industry. The head-quarter is located in Taiwan. The company has offices in China and in Japan. The number of employees is up to 623 persons. The major products and services are IC solutions of Flat-panel display driver, Video controller and Image controller. According to the financial report of the company in 2007, Novatek took 11.6% market share in terms of revenue of Flat-panel display driver which makes the company to be the world’s second largest supplier after Samsung. There are over 30 key IC design houses around the world. Most of the players are in Japan, Korea and Taiwan. In this industry, a niche market strategy is important for long-term competition advantage. For example, some companies invest in the in-house design or focus on vertical integration to differentiate the market position.

![Figure 4: Display Driver Market Share Estimate for 2007](http://example.com/driver-market-share.png)

Source: Novatek financial report, 2007

The trend of the IC design house is that large companies move to greater business scales. Therefore, the new plans such as e-paper IC and LCD controller IC are considered to be updated products in the business scale of the industry. Taiwan is standing at one of the top 3 major chip supply markets around the world. The development of the semiconductor industry has been well-established. As a Taiwan based IC design house, Novatek takes advantage of efficient interaction with the

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**IC**: an integrated circuit is another name for a chip which is a small electronic device made out of a semiconductor material. The first integrated circuit was developed in the 1950s by Jack Kilby of Texas Instruments and Robert Noyce of Fairchild Semiconductor. Integrated circuits are used for a variety of devices, including microprocessors, audio and video equipment, and automobiles. [http://www.webopedia.com/TERM/I/integrated_circuit_IC.html](http://www.webopedia.com/TERM/I/integrated_circuit_IC.html)
upstream and downstream partners, the company offers complete IC solution and services to customers.

The interview was conducted with the product planner of Image department. The business of the division is mainly B2B service. Her responsibility is planning new products based on marketing requirement and internal resources and capability. Moreover, she is experienced in the coordination of the IC design orders from customers. She has almost a four years working experience in the company and she used to work in the R&D department at the beginning. Therefore, a strong technical know-how is her strength when she was transferred to be a project manager. She managed driver IC solutions in the past two years, and currently she is handling the Web cam controller and LCD driver IC product lines.

We spent almost an hour for an on-line interview. The interviewee had the chance to have a look at the interview questions a week ahead. The company had no specific portfolio management system as a tool of managing projects. Novatek categorizes its projects according to its product lines. However, there is nothing like project categories in the organization. The company gets project ideas and requests from the unexpected order of current clients, market information as well as regular meeting with customers.

4.5.2 Interview findings

Distinct characteristics of emergent projects

According to the experience of the interviewee, emergent projects could happen once or twice a year so far. In Novatek, customer relationship, (Return on Investment) ROI and market analysis will be evaluated before making any decision on any projects. They carefully analyze the market situation before they start a new project. No matter what kind of project it is, business plan must be prepared for it in advance. It is the CEO who makes the final decision on starting any project. And the planners play an essential role to discover new opportunities in the market. In the meantime, they have to ensure that the profit and quality of each project proposal is up to the standard. The next thing they do is to address the impact of the chosen project in the project meeting. If they see a very good opportunity, they have to convince the decision maker. On the other hand, if there are a lot of risks involved, the responsibility is to suggest the contingency plan or eliminate the project out of the portfolio. The profit center approach is applied in the revenue management. There are eight SBUs (Small Business Units) within the company. The revenue management of each business unit is independent. The department heads in the organization are responsible for the revenue and expenses in the various business units of the company.

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7 Profit Centre: A unit, or department within an organization that is considered separately when calculating profit. Profit centres are used as part of management control systems. They operate with a degree of autonomy with regard to marketing and pricing, and have responsibility for their own costs, revenues, and profits [http://dictionary.bnet.com/definition/profit+center.html](http://dictionary.bnet.com/definition/profit+center.html), BNET Business Network
Our respondent made it clear for us that resource allocation, esp. human resource, is one of the most important issues she always deals with. Therefore, it is always important for the project manager to prioritize the projects. She mentioned, “You need to get a consensus inside your organization about any change on project priorities. We coordinate tasks inside the SBU. Our SBU has R&D and PM.” Regarding the communication issue, the interviewee suggested that project managers should communicate with customers frequently in order to agree on the bottom line of new product’s schedule.

According to our respondent, emergent projects are rare in the company. But it provides opportunity for new means of profit when it occurs. Moreover, it supports the long-term relationship with major partners. In fact, cooperation with customers through emergent projects had increased the company reputation. For example, there was a project requested by a client who has a leading position in the mobile industry. The successful completion of the project proved the outstanding R&D ability of Novatek. The reporting process for projects is similar for all projects within the organization and hence there is no specific reporting process for emergent projects. The interviewee indicated us that the company is a project-based organization. All SBU share the finance, HR, and administrative departments. The evaluation process is mainly related with the feasibility study in terms of market analysis, risk analysis, ROI and internal approval as discussed before. They use marketing tools in general instead of any other methodology. She specially emphasized that risk analysis is based on schedule control of the project team and competitor's situation. The one key question which is always asked to the project team before any project starts is, “Can the customer really sell out the products which are designed by Novatek?”

Overall, the respondent concluded that the only difference between managing emergent projects and normal projects within the portfolio pipeline is schedule control. The reason is that the customers always expect the product to be ready as soon as possible. The project team usually faces tighter schedule of emergent projects than the regular projects. She said, “You should understand the resource limitation inside the organization and the current situation of competitors in the market when you negotiate with your customer on the terms of projects.”

Novatek started the implementation of the new ERP system in 2007. The company used to employ its owned operation system which was developed and maintained by the IT department before the implementation of the new ERP system. Although there was an internal system supporting the operation process, there were a lot of documents and paper works in the process. Therefore, change in the operation system was the first major point which affected the strategy of the company directly. Due to the fast-moving rhythm and the highly competitive nature of the industry, they have to keep updating new products to clients. Additionally, the increment of new SBUs in terms of products or services such as power IC and LED driver has enhanced the competition in the market.
Strategic impact of emergent projects

The strategic changes mentioned above mainly came from top management instruction or the external indirect forces from competitors. She mentioned, “For driver IC product line, we always compete with our competitors. Therefore, it is very important to keep updating our customers with new products. Getting feedback from customers about what they need is another essential task. It is for the reason that once you get information earlier than your competitors, then you will have a better chance to win more market share.” The development of technology is directly related to the competition. She claimed that the project team has to prepare the technology in advance before they approach clients. After reviewing the project works in the past few years, the significant projects regarding LED Driver IC product lines was started. The main reason for establishing these projects of new product strategy is that the organisation wanted to find additional cash flow. Maximizing profit and revenue are the prior concerns of all the business units.

There are three aspects for the goals of emergent projects in the company and these are: strengthening the relationship with customers, enhancing the brand reputation and expanding the market share to increase the revenue. The specific example we can refer to is the driver IC project for the No. 1 mobile supplier as we discussed it earlier. On the one hand, the cooperation brought business opportunities and had strategic impact. On the other hand, this project created challenges for the project team. Controlling risk was the first thing they should deal with. The project manager mentioned, “Sometimes your customer is too expectant and optimistic about the new project but it might fail in the end. Therefore, we should estimate the risk and decide whether it is worth spending resource on it.” It is also evident that the project team is responsible for the evaluation of the new business opportunity as well. They have frequent communication with clients in order to figure out the strength and weakness of the new projects from both sides.

In this company, emergent project are expected to generate additional revenue to the company. “ROI and payback are always what we should keep in mind”, said the interviewee. In addition to that, having more project success enhances the competitive edges of the company in the market. The outcome of project management can directly be seen in the earned market share of the company. “The most profitable IC design house always has the first market share”, asserted the interviewee. Therefore, the growth of market share relatively indicates the increment of revenue. Additionally, the project result in the market share will ensure the bargaining power of the company with suppliers so that Novatek is able to save the production cost an incoming business.
4.6 Trend Micro, Taiwan Ltd

4.6.1 Company Profile

Trend Micro Incorporated offers global anti-virus solutions for network and internet security. Founded in 1988, the company has been a pioneer in anti-virus management in various platforms. Basically, the company offers single product lines for diverse markets. The continuous technology development and partnership are key factors for long-term success. Referring to the updated finance data, Trend Micro generated US $848 million total revenue in 2007. So far, the number of employees is more than 3,600. It’s headquartered in Tokyo. There are operation offices around the world in 17 major European countries, United States, Canada, Brazil, Mexico, Taiwan, China, Korea, Middle East and Africa. The international operation offices are established in more than 30 countries.

The anti-virus protection services of Trend Micro widely cover personal computer, enterprises systems and all networking devices. The product lines of this software company are simpler than general software providers. Thus, there may be potential risk of current product strategy. Continuous innovation in terms of secure content management solutions and continuous growth of technology development partnerships are emphasized in order to maintain the core competence of the organisation. In recent years, the rapid change and growing complexity of the internet has brought many challenges to security industry. In order to satisfy higher demand from the clients, the company considers these security threats are forces for technology development. As a goal, the company is aiming to support the security for the transfer of digital information.

The interview was carried out for around fifty minutes with the Technical Manager of the Information Service Department in Taiwan. The major responsibility of the interviewee is offering technical support for enterprise product line of sales department and development of new system. The department he works for mainly serves other business units internationally within the organization and B to B clients. He has worked in the operation office for the last two years. There are 17 members in his regular project team. Regarding the internal information service, the team manages Siebel CRM System supplied by Oracle as sales support. This software delivers strong support for the sales team in order to maximize real-time sales effectiveness by accelerating the quote-to-cash process, aligning sales channels, increasing pipeline and win rates, and raising average transaction values.

4.6.2 Interview Findings

Distinct characteristics of emergent projects

In this company, there are many approaches to categorize projects. The project categorizations are often based on products, clients, or even project type. As for the category of products, the anti-virus products can be divided into software for enterprise and end-user as well as part hardware. The solution targets on home office
scale, small and medium business units, and enterprises. Therefore, there are projects implemented according to the category of clients. Considering the project within the division, the projects are related to the goal of department or division. For example, the human resource department may have specific projects which are driven to achieve the recruitment quality or internal training. Basically, the company is completely project-orientated. It can be considered as a project-based organization.

In the organization, the new project initiatives are based on instruction from top management, unexpected request from clients, sometimes from project meeting with colleagues or inspired by competitors’ activities. In the past few years, the interviewee has managed two to three emergent projects. The most recent one is the most important one. This project is requested by top management and the goal is to support the organizational re-engineering.

The key decision makers of project selection are CEO, Sales Head, IS Head (CIO Chief Information Officer). Referring to the on-going emergent project which is currently in the Information Service Department, they have regular meeting. However, decision was made in a very short time for the project. The context of the project influenced the criteria of final decision. Mainly, the top management expected that the emergent project will support the organizational learning, knowledge management, transparent managerial process, working efficiency and human resource management. Ensuring the achievement of these goals was the decisive criteria for the project. When a new project is initiated, the screening criteria are higher than the year before. Only projects with true business impact and good cost saving ROI will get priority.

Initially, the emergent project was requested by top management and it was considered as a new support activity of company strategy. The technical manager said, “I am not sure if it is purely emergent project, but it was not really part of our plan this year.” It is because before the start of the emergent project, there was a project plan draft with the same goal. However, the delivery time of the original project could not satisfy the target users. For that reason, the project was postponed for more than a year. One month before our interview, the project team suddenly got an instruction from the top management. They have to achieve the same strategic goal of that pending project with a substituted another project design. Therefore, the project “Trend Micro 2.0” emerged. The emergent project brought problems of time, quality management, and resource reallocation. The respondent described “We have put too much effort on both the original work and this additional project work. It’s a headache that we have to complete the project before the end of February. The project team works over time almost every day!”

Based on the discussion above, we figured out the main issues the project leader had when he managed the emergent project. Resource allocation in terms of staffs and time was the first issue to deal with, especially with the global project. It requires additional cost, flexibility, management of work under different time zone. Moreover,
the acceptance of emergent project has changed the routine operation. People involved in the emergent project have extra work load. For example, the emergent project is about implementation of a new system. Before the development of this system, the sales office used to keep the client information to themselves. However, the new system required their support to input account interaction and management detail. It created additional work load of data input. What followed is the coordination and communication issue with other department or suppliers. The project leader has to ensure the performance in a tight delivery time with open and efficient communication with the project team. He has to motivate the people to work under pressure. Meanwhile, the interviewee has to communicate with the downstream partners. This is because the system allows their clients to place order and review the business record. Overall, the project offers supervisors a transparent platform to analyze the business opportunities from the customer’s pool. Therefore, the managers are able to forecast the yearly plan according to the daily report. Another positive result of the emergent project is related to integration of the operation process. The transparent platform increase quality and support cost reduction indirectly.

The reporting process is the same for all types of projects. The department heads prepare the proposal to CEO. Then the key persons will decide on the project selection. When a project is running, there are regular meetings on the main aspects of the project such as the schedule of achievement and risk management. Regarding the difference between emergent project and normal project, the interviewee stated that the project methodology is usually the same. However, emergent projects require more budgets because usually they have to be completed in a short time. Additionally, controlling risk is essential due to the fact that the planning phase of emergent project is shorter than normal project.

**Strategic impact of emergent projects**

The respondent has noticed that his company made some organizational changes to increase its competitive power in the past few years. Firstly, the company has decided to take a re-engineering activity due to the unstable situation in the current financial market. Therefore, the Trend Micro 2.0 Project is the most visible project now. All the project members were putting much effort to have continuous innovation and improvement in the organization. He said, “We are not just painting a rose garden and pretending to be optimistic - there are specific things we are doing, including the revision of 2009 Plan Number, preparing Plan B to deploy should the recession continue, lowering costs where we can, and doubling the cash performance bonus to provide upside for everyone.”

In order to deploy the strategic change, the company decided to cancel Global Summit this year. However, they are still committed to the strategy that has been decided upon last year which is about development of core value. The company also uses smaller group and video conferencing to achieve the goal of “Align on strategy and
execution”. The company has decided to confront up-front the market uncertainty caused by the current financial crisis. They have aimed to reduce the cost of the overall organization. The growth rate of the company has been already lowered to 15% from 20%. Therefore, each region is impacted differently, and each function head will receive a top down budget cost number based on the revised growth rate. In the meanwhile, each business unit and department has to prepare a backup plan which is designed with another 15% decrease of the reduced cost. If the market situation keeps fluctuating next year, the company can quickly adjust the cost accordingly. The main reason for the changes mentioned above is related to the economic slump. In general, the knowledge management, influence from the top management or change in the marketing strategy such as new target of product or services forced to bring strategic transformation in different scales.

Broadly speaking, the project is aimed to enhance the sales performance globally. It is considered as a global sales force automation project in regards to the establishment of a sales force automation platform. The target users are internal sales and channel partners, such as distributors and resellers. The project will be carried out till the end of February in 2009. Currently, the project team is challenged by a tight schedule, limited resources as well as additional effort on a cross regional communication. Our respondent predicted that the project will have impact on the operation flow. The final performance will deliver positive impact on the core competence of the company in terms of organizational learning, service quality, cost-effectiveness and customer relationship management. Therefore, there could be greater business opportunities in the future. In his opinion, implementation of the project always deals with some changes. Integrated information supports the customer relationship management with partners. As a result, whether it is an emergent project or normal project from the portfolio, the success of any project will increase the core competence of the whole organization gradually.

4.7 Discussion of analysis findings

After the analysis of each interview case, we reviewed all the responses according to the sequence of our interview questions. The matrix is designed as a support tool of analysis (Appendix 2). Overall, we did twelve interviews for our study. It can be seen from both the analysis and the matrix that we combined the four interviews we did with the Volvo Trucks cab plant in Umeå. The reason is that all the interviewees gave us more or less the same responses and it must be because they are all from one department in the company. Therefore, there are totally nine sets of data presented in the analysis matrix. Five sets of data are collected in the car industry, and the other four sets are from two IC-design houses in different specialty from the semiconductor industry, a company which provides anti-virus solutions in the software sector and a linear technology solutions manufacturing company.

The five questions in the second section of the interview were designed to get a general understanding on the interrelationship between the strategy of the company
and the way projects are managed in the company. With regard to organizational changes in the past few years of the companies we interviewed, we noticed that most of the changes made were related with operation improvement like quality and efficiency improvement. There are four companies which implemented new ERP system to bring continuous improvement in their companies. Moreover, the other common change among the companies was updating their products or services which are mentioned by more than 60% of the interviewees. This approach is the most common way to sustain innovative activities in their companies and refers to their new market strategy or enhancement of their core competence.

These changes are mainly caused by three reasons: top management instruction, threat from competitor and legal and environment issues. The projects which came out of these changes are mostly initiated by organizational learning. These projects usually are built on the experience gained from the success of previous projects. Projects like standardization of processes and operation platform or products are some of the examples we have from the interview. Cost reduction and customer relationship management are discussed as the goals of these significant emergent projects.

Generally, these companies categorize their projects according to products and services or project scales. However, there are four project managers who are not familiar with the issue of project portfolio management. Their project ideas are generally developed in a project meeting and unexpected request from clients. The unexpected request from clients could be led by top management, project sponsor or vendors.

The third section in the interview focuses on the issues which are directly related to the nature and strategic impact of emergent projects. Most of the respondents commented that emergent projects occur rarely. The most important criteria of emergent projects are related with financial evaluation tools such as ROI, forecast of cash flow, revenue or profit. The other criteria are whether the projects bring potential business opportunity and customer relationship enhancement. Generally speaking, the decision makers of emergent project are line managers, top managerial bodies such as department heads or CEO or portfolio managers.

When we talk about the key issues of managing emergent project, factors such as resource allocation, communication within organization and clients, internal coordination and internal report process are most frequent in the responses of the interviews. More than 90 percent of the interviewees raised the resource allocation issue. It can be analyzed as project prioritization in terms of human resource, budget, and time. The project stakeholders with whom communication should be kept are the project sponsor, project team members, project users, or clients, suppliers and business partners.

Concerning the effect emergent projects bring upon other projects, they frequently affect the mainstream projects in terms of staff allocation and increases the demand of additional budget. However, emergent projects provide business opportunities in three
approaches as well. Firstly, emergent project are said to bring increment of revenue, competitiveness, company reputation or customer relationship. Some project managers explained that the implementation of emergent project delivered the above advantages to organizations in a shorter time period. The other opportunities emergent projects brought are related with process improvement, cost reduction and skill enhancement. For example, the ERP system optimized the work efficiency, offered transparent platform for operation and cross-functional communication. Additionally, emergent projects are found to open a link between companies and the society. In the car industry, environmental concern is essentially related with their technology development in the industry.

Basically, all our interview responses showed that there is a standard reporting process for projects and it is applied for emergent projects as well. The common goals of emergent project we found out in the interview are time management, cost reduction, customer relationship management and positive financial contribution. In the car industries, the standardization process and IT systems delivered process improvement and cost reduction which is similar with the improvement made in the sales force project in Trend Micro, the software industry. Furthermore, customer relationship was cited by four project managers to which they referred as a foundation for their potential businesses they can rely on in the future. But customer relationship is part of the challenges in managing emergent projects. The solution suggested by some of the project managers is open communication between the project team and the clients. Another challenge emergent projects pose is that they disrupt the routine work flow of the concerned offices and departments. The challenges are in terms of time and resources. Besides, risk management was illustrated as one of the challenges in our four interviews. Thus, we can state that emergent projects are mostly risky due to the shorter planning phase and limited implementation time.

Almost half of our respondents think that there is no difference between managing emergent projects and normal projects. They noticed that the project management method and approach to be the same for both kinds of projects. However, one of our respondents added the point that emergent projects have a higher priority and attention from top management which puts more pressure on project teams to succeed.

As regards the results achieved by emergent projects, helping to facilitate the operations and to develop the core competence of organizations were the main responses we got. For financial criteria is one of the major measuring standards in the project selection process, when emergent projects succeed they bring profit to shareholder. Through the management of emergent project, project team would learn how to deal with challenges with tighter schedule. The communication or negotiation skills would improve quicker due to the occasional short life cycle of emergent project. Moreover, organizations find the chance of expanding their market or raising their company reputation when they prove themselves to be able to deal with emergent projects.
5. Conclusion

As there are emergent strategies in a properly planned organization, our research assumed that there are projects called emergent which are not part of the regular and well arranged portfolio of projects in the organization. Whatever affects the deliberate strategies of organizations affects its project portfolio and thus it is so natural for emergent projects to follow emergent strategies. We went further in assuming that these kinds of projects are usually so crucial that they have the potential of making the organization more competitive. Hence, we proposed to identify the possible distinct characteristics of emergent projects and their strategic impact on large organizations in our research question. We conducted our research on large and international companies in Taiwan and Europe. We wanted the companies to be in a highly competitive market so that we would be able to see the dynamic nature of their strategy and project portfolio. The companies are generally from the car, IT and IT related industries which are industries where fierce competition is ideally most prevalent. We used semi-structured interview to collect our data and employed template analysis method to analyze the collected data. Three companies from Taiwan responded to our interview and the others are from Europe: one from Germany, one from Sweden, and one from Switzerland.

For the fact that we hardly found literature on the exact term of emergent projects, we knew from the very beginning that the term ‘emergent strategy’ is not going to be easily understood by those practitioners whom we were going to interview. Therefore, we needed to define it by ourselves and tell what we mean by emergent projects before we start to interview them. We defined emergent projects as an “untypical or irregular projects for the organization which are at the borderline or even outside the mainstream of the current portfolio of projects. These types of projects impact the company’s strategy with the aim to increase the organizations competitiveness.” We tried hard to make the questions very simple so that we can get enough information which can be translated into answering our research questions. For example, we asked them where they usually get their project ideas and assignments and how they categorize their projects in their company in general or in their department in particular. These and some other similar questions helped us to find out what kind of projects they are managing and whether some of these projects can be labelled as emergent.

Hence, we understood from their replies that almost all of them have identified some of the projects they have already managed or is managing now with emergent projects. They have dealt with projects which are untypical in the sense that they are at the borderline or even outside the mainstream of their current portfolio of projects. Some of these emergent projects happened to come from top managers as a direct instruction, from project learning and from unexpected request from clients as we have assumed about emergent projects at the outset of the research. The underlining
assumption of our research was that top managers and clients, in accordance to the dynamism of market situations, presents the need for emergent projects and it is well supported in the research. The assumption that there is a strong correlation between emergent strategies and emergent projects is supported as well in our research. Significant changes in the companies with regard to enhancing their competitiveness brought untypical projects which we called emergent projects. However, we expected emergent projects to be a frequent phenomenon due to the frequent changes companies have to go through in the current dynamic business world but most of our respondents admitted that emergent projects occur only rarely.

5.1 Answering the research questions

Our research questions are about the distinctive characteristics and strategic impacts of emergent projects in large organizations, more specifically in international companies. On the basis of the above assumptions, our research questions were a means to address two issues regarding emergent projects: distinct characteristics and strategic impact of emergent projects on large organizations. The first important point we have come up to notice about the nature of emergent projects is that they are closer in concept with strategic projects except that there is an emergent nature about them. Progressive changes inside the company or outside in the market compels managers to initiate different strategic projects which sometimes do not easily fall into the usual categories of the company’s project portfolio. Emergent situations force managers to come up with an idea of strategic projects or it forces them to listen their customers and meet their needs through strategic projects. Therefore, emergent projects are kinds of strategic projects which have bigger significance and bring a higher sense of urgency to organizations than the normal projects in the portfolio. Furthermore, it is noteworthy to point out that we are convinced about the similarity of emergent projects with normal projects with regard to the way they are managed. It is because most of our respondents agreed that once emergent projects are set to motion, they are handled with the same project management method and approach as any of the other projects they have in their portfolio.

As our study indicates, however, they are characterized by rarity, disrupting routine operations, enhancing company-customer relationship, causing resource reallocation, bringing profit, demanding higher budget, opening both internal and external new opportunities, posing risk due to shorter planning phase and limited implementation time, and capturing higher attention from top management. These not-so-unusual characteristics might not make emergent projects to be quite ‘distinct’ but do make them very strategic. The major facts which reflect the strategic impact of emergent projects are their potential to bring profit, as well as new external and internal opportunities which in total make organizations to be more competitive in their market.
5.2 Theoretical implications

Our research is grounded on the theories of emergent strategies, strategic project management, project portfolio management and project categorization. Consequently, we believe that the study has some theoretical implications in relation to all of the aforementioned theories except emergent strategies.

The idea of emergent projects should be incorporated in the study of strategic project management because the causes of emergent projects are unavoidable in the kind of business environment we have today. We have already seen that strategic project management is about making organizations more competitive in their market using project management techniques and business strategy. These strategic projects are not always the regular and typical projects in the portfolio. They can arise through the different forces of the market around in a very abrupt and irregular manner. Most of the studies in project management assume static and normal conditions for projects to be initiated and planned. But markets and technologies change very frequently forcing companies to be widely-awakened and excel their competitors in many grounds. Thus, the forces behind emergent projects will continue to exist. It would have been easier to set them aside if they were not strategic but our findings indicate that they are. As a result, the study of strategic projects will not be complete without considering these factors of emergent projects.

On top of that, as most of our respondents said, managing emergent projects is similar with any other projects. However, the process of adding emergent projects into the project pipeline and validating their significance in the process of project selection and prioritization is another issue to deal with. Though emergent projects will finally sink into normal types of projects as most of our respondents affirmed, they were not part of the mainstream projects the company had in its portfolio. Hence, the interference of emergent projects into the project selection and prioritization process of the company needs theoretical considerations so that most benefit can be drawn in including them.

The idea of emergent projects could also be the basis of project categorization too. As we mentioned it earlier, emergent projects have usually strategic impact. In their study of project categorization, Crawford et al (2006) identified 'strategic importance’ to be one of the attributes on which projects can be categorized. Thus, we believe that emergent projects can be categorized under the attribute of strategic importance.

5.3 Managerial implications

In relation to our research findings, the points we want project managers in particular and executives in general to consider are as follows:

- The managerial body of organizations need to be aware of the fact that projects arise from the dynamic business environment surrounding their company
Managers need to recognize the influence of the strategic changes their companies make on their project portfolio.

The sources of emergent projects can be internal like organizational learning or top management instruction and external like unexpected request from clients.

Those projects which are irregular or untypical in the portfolio need more focus in terms of resource allocation, risk management, assuring financial gain and keeping sustainable company-customer relationship.

It is very important to make urgent and decisive actions to take emergent projects on board and utilize the wide new opportunities they bring to the internal and external environment of organizations.

Managing emergent projects don’t need any different project management method or approach.

Some strategic projects can be categorized as emergent projects due to their strategic importance and distinct characteristics.

5.4 Strength and weakness of the study

The strengths of our research are mainly related with our data sources. We had the privilege of contacting and interviewing large and international companies both in Europe and in Far East Asia. The car companies we interviewed are, Daimler AG in Germany and Volvo Trucks cab plant in Umeå, not only big companies but are known all over the world as the major producers of cars. The other companies we interviewed had also the reputation of being successful in their technological and IT related sectors around the world. Most of our respondents from each of these companies were too cooperative and kind enough to spend time with us during the interview process. Subsequently, we collected data which can be qualified as reliable and valid. The other important strength we believe our research has is that we did not lack enough theoretical grounds on which to build our idea on emergent projects though the exact term is nowhere to be found in the project management literatures.

The first weakness of our research is that we have an imbalanced data. We interviewed only one person from all the companies except the two car companies we contacted in Europe. In the two car companies, we interviewed four people each. The reason why we did that is because the project managers in these two car companies chose to respond through email rather than being interviewed. And we thought if we can get more than one responses from these project managers, we would be able to get more information. Accordingly, we decided to send our interview questions to four project managers to each of these companies. At the beginning we sent the interview questions to Volvo Trucks cab plant in Umeå. All the responses we got from them were almost similar because all of them were from IT department with no big difference on their working experience. When we sent our questions for Daimler AG in Berlin, we decided to send the questions to project managers in different departments or divisions. Additionally, some of the respondents chose not to answer.
some of the interview questions. The data we collected finally looked to be a bit lopsided and it affected the pattern we tried to find out among all the companies.

The other weakness of our paper is that it is not as deep and diversified as it should be due to the very short time frame we had to complete the research. We needed to narrow down our scope of the research and make it more focused on the nature of emergent projects and their impact on organizations. There were yet many possibilities to expand our scope. We could have been able to compare the Taiwanese companies with the European ones; we could have had a better sample for our data collection; we could have done the research on organizations of different scale than just on large companies. However, we chose our sample now for the simple reason that it was convenient for us to access these companies in the given timeframe.

5.5 Further research

Some of the theoretical implications of our research point toward the further researches that should be done on emergent projects. Further researches should be done on how the dynamic situations of business environments and emergent strategies affect the project portfolio of organizations. Moreover, it is worth researching on how the idea of emergent projects are dealt in the studies of strategic project management and project categorization both in the academic and the practitioners world. Comparing the way organizations of different scale and different locality deal with emergent projects can be another area of research.

Though emergent projects are rare to occur and needs nothing more than the same project management approach as any other normal projects, our research indicated that organizations need to embrace the idea of emergent projects if they want to continue on gaining competitive edge in the market. When projects are categorized according to their strategic importance, sources or urgency, some projects can be labelled as emergent projects and be treated as a kind of strategic project which require more attention from top managerial bodies. To conclude, as one of our respondents identified his re-engineering business model project with emergent projects, we believe emergent projects are crucial and strategic for companies. Organizations will benefit in identifying some of their projects to be emergent and in taking appropriate actions as suggested in our research.
REFERENCES


APPENDIX I: The semi-structured interview questions

Before the respondents of our interview embarked upon the questions, we wanted them to understand what we mean by emergent projects and thus gave them our definition for emergent projects as the following:

Emergent projects: - untypical or irregular projects for the organization which are at the borderline or even outside the mainstream of the current portfolio of projects. These types of projects impact the company’s strategy with the aim to increase the organizations competitiveness.

The interview questions looks like the following:

Section I

1) Your company name and website (optional)

2) Your responsibility (In short description or bullet points)

3) Your department or division

4) How many years did you work in the company?

5) Major clients of the company (optional)

6) How many persons maximum have you ever had in your project team?

7) What kind of product/service do you usually manage in your projects? (short description)

Section II

1. What changes did your company made in the past few years to increase its competition in the market? (You can have more than one options)
   a) Introducing new products/services to the clients
   b) Expanding the market rapidly, such as set up new department or new office in a new market
   c) Increase new Business Unit in terms of products or services in the organization
   d) Process or methodology change of operation management, such as ERP, Project for work efficiency…etc.
   e) Management Change- from function-orientated to project-based orientated
   f) Other:_________________________________________________________________
2. What caused those changes? (you can have more than one options)
   a) learning from past experience
   b) legal and environmental issues
   c) top managerial instruction
   d) Reposition your product or services
   e) Threat from other competitors
   f) Other: _______________________________________________________________

3. Did any significant project for the company come out of these changes? Can you please
give us some idea of what those projects were like?

4. How do you categorize projects in the company? On the basis of –
   a) products
   b) divisions
   c) different clients
   d) Project scale, for example, in terms of size and budget.
   e) Project type such as engineering project
   f) Other: _______________________________________________________________

5. How do you get new project ideas? (You can have more than one option)
   a) From project meeting
   b) From regular meeting with colleagues
   c) From regular meeting with managers
   d) Direct instruction from manager
   e) Unexpected request from Clients
   f) From competitors products/services
   g) Other: _______________________________________________________________

Section III

1. How frequently did you manage emergent projects, for example, in a year?

2. What are the criteria for the final decision of the emergent projects? Who are the key
decision makers?

3. What are the key issues in managing emergent projects?
   a) Resource allocation in terms of budget, staff or time
   b) Changing the routine operation
   c) Coordination in terms of cross department or internal function
   d) Coordination in terms of suppliers or external partners
   e) Internal report process
   f) Communication with project team or within organization
5. Can you please give us further explanation about what you choose in the above question?

6. What effects did these emergent projects have on other projects?
   a) Cancelling or postponing other projects
   b) Staff reallocation
   c) Higher need of budget which will affect the budget for the other projects
   d) Less quality concern for other projects
   e) Others:

7. The new opportunities emergent project bring to the company are:
   a) External to the firm, such as improved revenue, profit, competiveness, reputation or stakeholder relationships in the future.
   b) Internal to the firm, such as process improvement, quality improvement, cost reduction, skills enhancement or employee wellbeing
   c) For combination of internal and external improvements, such as improvements in community relationships, corporate social responsibility or environment
   d) Other: Please specify ________________________________________________

8. Is there any company regulation for emergent projects? Please give a brief description.

9. Is there any reporting process for emergent projects? Please give a brief description.

10. What were the goals for the emergent projects you managed recently?

11. What were the challenges in managing these emergent projects?

12. In your opinion, what is the difference between working on emergent projects and other normal projects?

13. What were the main results of these emergent projects for the company?
   a) Impact on shareholders, such as additional revenue or potential business in the future
   b) Impact on project teams, such as develop the improvement of work efficiency,
learning ...etc

c) Impact on internal operation, such as change the managerial process or increase core competence

d) Impact on organization in terms of external competition, such as market expansion, entry new market segmentation or repositioning of the products, services, or brand

e) Others___________________________________________________________
### APPENDIX II: The Analysis Matrix

<table>
<thead>
<tr>
<th>Qns</th>
<th>Daimler 1</th>
<th>Daimler 2</th>
<th>Daimler 3</th>
<th>Daimler 4</th>
<th>Volvo (combined)</th>
<th>Schneeberger AG</th>
<th>ISSI</th>
<th>Novatek</th>
<th>Trend Micro</th>
<th>Emerged Pattern (Common choices made)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B,D</td>
<td>A,C,D,E</td>
<td>A,D</td>
<td>A,B,D</td>
<td>D</td>
<td>F) Others: Keep updating Innovation ability</td>
<td>D</td>
<td>A,C,D</td>
<td>A,D,E</td>
<td>A,D</td>
</tr>
<tr>
<td>3</td>
<td>Changing the product and service offerings and back-office changes. / Goal: cost cutting and growth.</td>
<td>NO</td>
<td>Projects started to standardize the application landscape to save cost</td>
<td>N/A</td>
<td>Unsere about projects but organizational learning through experience has been gained</td>
<td>Projects initiated by the request from client. / Product Development partnership</td>
<td>ERP system project. / A project caused from the requirement of the client due to environmental change</td>
<td>New product lines / Project would like to find ind new cash flow/ New ERP system</td>
<td>New system regarding sales process re-engineering because of continuous improvement</td>
<td>The standardize platform or operation system</td>
</tr>
<tr>
<td>4</td>
<td>D,F</td>
<td>C,D,E</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A,B,C,D,E</td>
<td>A/D</td>
</tr>
<tr>
<td>5</td>
<td>g) Other: from yearly strategy process or from respective top management / sponsors.</td>
<td>A,B,C,D,E,F</td>
<td>C,D,E</td>
<td>g) Other: Unexpected request from internal customer divisions, legal requests, maintenance or lifecycle requests</td>
<td>g) Other: Usually the business side, Volvo Trucks, is requesting an IT-project connected to a business project.</td>
<td>A,E</td>
<td>D,G (Other: Request from Vendor)</td>
<td>E, F, G Regular meeting with customers</td>
<td>A,B,E,F</td>
<td>A/E/G</td>
</tr>
<tr>
<td>Sect 1</td>
<td>Most projects due to size, scope and complexity are</td>
<td>15</td>
<td>Only few in a year.</td>
<td>one or two a year</td>
<td>N/A</td>
<td>Depends on the scales.</td>
<td>Not very often, it depends on the market</td>
<td>Once to twice a year.</td>
<td>2 or 3 a year</td>
<td>no more than 3 times/ not often/ zero</td>
</tr>
<tr>
<td>Qns</td>
<td>Daimler 1</td>
<td>Daimler 2</td>
<td>Daimler 3</td>
<td>Daimler 4</td>
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<td>-------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>longer than one year</td>
<td>Reclamation by CIO</td>
<td>Decision committee decides the start of &quot;big&quot; projects according to the scale. Budget defines smaller or bigger projects.</td>
<td>key performance indicator: strategic impact, higher sales potential, potential to enabling new business use and threat from other competitors</td>
<td>The portfolio manager</td>
<td>Profit/ customer relationship/ Technical ability / Decision made by Head of Profit centre unit, Sale and marketing director and Head of logistic.</td>
<td>Revenue, sales number &amp; Profit percentage / PM &amp; CEO</td>
<td>Customer base/ ROI/Market analysis: Is it a growing market or a market which we want to expand.</td>
<td>The improvement of organisation in terms of services, customer relationship, ROI/ CEO and department heads and CIO</td>
<td>Criteria: Revenue/Profit/ROI/ Higher business potential / Customer relationship/ Don't know Decision Maker: Line manager/CEO/Dept. Head / portfolio management</td>
</tr>
<tr>
<td>4</td>
<td>No big difference</td>
<td>N/A</td>
<td>The approved scope of the project including the budget, staff and timeline. This approval must be done by all relevant project stakeholders.</td>
<td>I don’t know</td>
<td>It’s outside the regular workflow</td>
<td>coordinate the resource control the quality /invest product development, minimize the risk /</td>
<td>Prioritization of projects is important.</td>
<td>Human resource allocation. / Project prioritization</td>
<td>Resource allocation Communication and negotiation. Customer relationship management for long-term business.</td>
<td>Stakeholder approval / Prioritization of projects / Resource allocation, the emergent project is outside the regular workflow</td>
</tr>
<tr>
<td>Qns</td>
<td>Daimler 1</td>
<td>Daimler 2</td>
<td>Daimler 3</td>
<td>Daimler 4</td>
<td>Volvo (combined)</td>
<td>Schneeberger AG</td>
<td>ISSI</td>
<td>Novatek</td>
<td>Trend Micro</td>
<td>Emerged Pattern (Common choices made)</td>
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</tr>
<tr>
<td>5</td>
<td>B,C</td>
<td>B,D</td>
<td>A,B,C</td>
<td>D</td>
<td>B</td>
<td>B,E</td>
<td>A</td>
<td>A,B</td>
<td>B,C</td>
<td>B/B/C</td>
</tr>
<tr>
<td>6</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>A,B,C</td>
<td>A,B</td>
<td>A</td>
<td>A,B</td>
<td>A/B/C</td>
<td>A/B/C</td>
</tr>
<tr>
<td>7</td>
<td>Depending on budget size, the approval process differs.</td>
<td>Leaning system, Method for reclamation and innovation</td>
<td>Regulation for all of projects describes a clear approval process for the projects and also a clear project management process.</td>
<td>Clear rules for project management</td>
<td>Not that I know of</td>
<td>line manager to department head meeting</td>
<td>line manager and CEO</td>
<td>CEO is the final decision maker. Process is internal discussion then gives him a proposal.</td>
<td>IS head suggested CEO. Depends on the project scale.</td>
<td>Standard process for Project management / Clear responsibly boards to start and monitoring projects.</td>
</tr>
<tr>
<td>8</td>
<td>Same as for other projects.</td>
<td>Learning System, Standards report, Best practice</td>
<td>Reporting process for all kind of projects. Based on - Scope - Human Resource- Time - Quality - Risk- Procurement - Communication- Cost - Integration</td>
<td>N/A</td>
<td>It follows the routines that we have for all projects, e.g. Reporting to the steering committee on a regular basis</td>
<td>Not really.</td>
<td>Same to other projects.</td>
<td>Same to other projects.</td>
<td>Same to other projects.</td>
<td>Same to other projects.</td>
</tr>
<tr>
<td>9</td>
<td>Standardization of products, processes and IT systems / Reduce operating costs / Enlarge the product offerings worldwide.</td>
<td>Time, cost budget</td>
<td>No real “emergent” projects on my side so far.</td>
<td>Top project team (motivation, work together, competences)</td>
<td>N/A</td>
<td>Satisfy the customer/ Generate the revenue.</td>
<td>Long term relationship with the supplier/ better material cost. Additional revenue</td>
<td>Customer relationship/ Company reputation/ Expand market &amp; revenue</td>
<td>Enhance the customer relationship management/ Cost reduction.</td>
<td>Time/ cost reduction/ Strengthen customer relationship or partnership/ Generate Revenue</td>
</tr>
<tr>
<td>10</td>
<td>The technical complexities of the IT process itself / time</td>
<td>Manage the dependencies between emergent</td>
<td>N/A</td>
<td>Disrupting the routine operation/ Risk management/ customer</td>
<td>Customer relationship management,</td>
<td>Risk control.</td>
<td>Risk control, Tightly schedule, and limited</td>
<td>Risk management/ Customer</td>
<td></td>
<td></td>
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</tbody>
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**Distinct Characteristics and strategic impact of emergent projects in large organizations**

2009
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<tr>
<td>11</td>
<td>No difference as based on the broad definition most of the projects at DFS can be considered emergent projects.</td>
<td>No difference regarding the project management approach except having a higher priority and higher management attention.</td>
<td>time</td>
<td>N/A</td>
<td>No big difference</td>
<td>Difficult to define. Emergent situation it’s like part of the nature of OEM design.</td>
<td>More pressure from top managers</td>
<td>Schedule control. usually have tighter schedule than normal projects</td>
<td>Risk control, additional resource, pressure of time</td>
<td>Emergent projects have a higher priority/ Higher management attention, more pressure from Top management / Project management methods are the same</td>
</tr>
<tr>
<td>12</td>
<td>B,C,D</td>
<td>B,C</td>
<td>E: Others: All the above mentioned points can be main results depending on the scope of the emergent project.</td>
<td>A,C</td>
<td>C</td>
<td>A,B,C,D</td>
<td>A,C,D</td>
<td>A,D</td>
<td>A,B,C</td>
<td>A/B /C/E: Others: All the above mentioned points can be main results depending on the scope of the emergent project.</td>
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