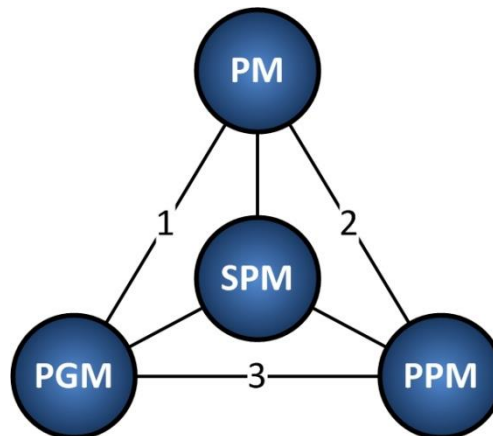




UNIVERSITY OF GOTHENBURG



Strategic Project Management

A study exploring the strategic relationship of project, program and project portfolio management.

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Abstract

IT development has enabled better management functions across all industries, inspiring many organizations to adopt process-centric business models. Introducing extensive change to business and related processes are usually planned at strategic level and then realized through initiatives such as projects or larger programs consisting of several related projects. For larger organizations involved in many development projects, (companies providing IT-solutions for example) project portfolios can be used to strategically manage and balance projects. In this context, organizations seek to develop their strategic project management capabilities in order to stay competitive and ensure strategic goals are successfully delivered. However, there are plenty of methodologies to choose from and also a noted deal of confusion surrounding the concepts of strategically managing projects, as identified by several sources. This leads to the purpose of the study; exploring the strategic relationship of project management (PM), program management (PgM) and project portfolio management (PPM). The methodology selected for the study began with a theoretical study, creating a framework by exploring concepts related to the research question. Next, a review of literary sources from major authorities within the project management field was consulted, specifically on the subject of the research question. Finally, central concepts found in the theoretical study was brought to the empirical study and further explored in interviews conducted with experienced project management professionals. The findings of the two studies resulted in a number of key factors related to the concept of strategic project management relationship. The main conclusion discovered that the strategic relationship of project, program and project portfolio management depends on the organizational context where it is applied. This context can comprise of a number of factors, the most prevalent and commonly referred to in the findings of this study being organizational maturity representing the chosen organizational methodology in relation to the size of the organization.

Keywords: project management, program management, project portfolio management, strategic project management.

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Table of Contents

1.	Introduction	1
1.1	Context.....	1
1.2	Background and Problem Discussion.....	1
1.3	Purpose and Research Question.....	2
1.4	Delimitations	3
1.5	Disposition.....	3
1.6	Abbreviations.....	4
2.	Research Methodology.....	5
2.1	Scientific Approach	5
2.2	Theoretical Study.....	6
2.3	Empirical Study	6
3.	Theoretical Study	8
3.1	Theoretical Framework.....	8
3.2	Literature Review	17
3.3	Discovered Concepts	25
4.	Empirical Study.....	26
4.1	Empirical Framework	26
4.2	Empirical Findings	28
5.	Analysis and Discussion.....	38
6.	Conclusion.....	42
6.1	Further Studies.....	42
6.2	Research Critique	43
6.3	Personal Reflections	44
7.	Bibliography.....	45
	Appendix 1	
	Appendix 2	

List of Figures

FIGURE 3.1 – SHOWING ORGANIZATIONAL DECISION MAKING LEVELS (BOCIJ ET AL. 2008).	8
FIGURE 3.2 – SHOWING A PROCESS TRANSFORMING INPUT INTO OUTPUT USING TWO LINKED ACTIVITIES. ...	10
FIGURE 3.3 – SHOWING THE COMMONLY USED PROJECT PYRAMID OF TIME, COST AND SCOPE.	14
FIGURE 3.4 – SHOWING A PYRAMID HIERARCHY OF THE PM, PGM AND PPM CONCEPTS (REILING 2008).	17
FIGURE 3.5 – SHOWING A GENERIC P3O ORGANIZATION RELATED TO PM, PGM AND PPM (OGC 2008).	21
FIGURE 3.6 – SHOWING A TYPICAL ORGANIZATIONAL ENVIRONMENT (PMI 2008).	23
FIGURE 4.1 – WHITEBOARD DISPLAYING THE CONCEPTS SELECTED FOR INVESTIGATION IN THE INTERVIEWS..	26
FIGURE 4.2 – WHITEBOARD DISPLAYING THE RELATIONSHIP MODEL RESULTING FROM INTERVIEW 1.	29
FIGURE 4.3 – WHITEBOARD DISPLAYING THE RELATIONSHIP MODEL RESULTING FROM INTERVIEW 2.	31
FIGURE 4.4 – WHITEBOARD DISPLAYING THE RELATIONSHIP MODEL RESULTING FROM INTERVIEW 3.	34
FIGURE 4.5 – WHITEBOARD DISPLAYING THE RELATIONSHIP MODEL RESULTING FROM INTERVIEW 4.	36
TABLE 5.1 – DISPLAYING THE KEY CONCEPTS FOUND IN THE THEORETICAL & EMPIRICAL STUDIES.	38
FIGURE 5.1 – DISPLAYING THE FACTORS OF THE ORGANIZATIONAL CONTEXT	39

1. Introduction

*Presented in this chapter is the **context** of the study followed by the **background and problem discussion** and the resulting **purpose and research question**. Lastly, initial **delimitations** and a structural **disposition** of the report are presented along with a list of **abbreviations**.*

1.1 Context

While searching for a topic on which to write my bachelor thesis, a mentor of mine from the Volvo IT company suggested I look into the concept of *program management* (PgM) as this was a development focus area of theirs during 2013 and as such, an appropriate subject to consider writing about. He could also provide me with relevant sources to interview on the matter. I was further told that while *project management* (PM) practices were fairly well established within the industry, PgM wasn't. The concept was new to me; however I soon understood *programs* to encompass multiple projects sharing strategic business goals and interdependencies. As the area of PM and its career prospects appeal to me, I decided to investigate further and so came across the concept of *project portfolio management* (PPM) which I perceived to concern deciding on the strategic relevance of each new and existing *project* or *program* within an organization. After having briefly scanned through available literature, I found that there were differing notions and definition of these three concepts and how they relate to each other. After discussions with my university supervisor I decided to investigate the concepts of PM, PgM & PPM and how they relate in a strategic perspective, having thus found an academically relevant problem to explore and clarify as well as an opportunity for adding to my own lack of knowledge on the subject.

1.2 Background and Problem Discussion

Managing projects has been crucial for the success of any large enterprise since the dawn of civilization and while this skill was developed over the centuries to keep pace with new inventions and innovative ideas, the coming of the rapidly changing information age revolutionized almost every organization despite trade or geographical location.

Recent trends see organizations adopting *process centric* views of daily operations made possible by the use of *information technology* (IT). This restructuring enables cost reductions and quality improvements as well as increased service levels and time savings. Using IT to enhance business performance is initiated by strategic plans which in turn result in projects set to fulfill the goals of those strategies. (Bocij et al. 2008, Papazoglou & Ribbers 2006)

Managing these projects require stable models that can ensure that goals are reached but also be flexible enough to accommodate developments in business strategy, for example new technological possibilities (Ritson et al. 2011). Reflecting this, many companies run large *programs* comprised of several interrelated *projects* and align them under *project portfolios* to better balance risk and coordinate them with strategic goals (Papazoglou & Ribbers 2006).

PM is well recognized in the business environments and using PgM and PPM to strategically manage projects is also quite common but often lack a unified best practice structure making the area challenging for many organizations to implement successfully (Papazoglou & Ribbers 2006, Artto et al. 2009, Görög 2011, Ritson et al. 2011, Morris & Jamiesson 2005), confirmed by the development efforts at Volvo IT heralding this investigation. It can be somewhat daunting for young organizations developing SPM to try and adopt the full complexity recommended by some methods (Handler 2012). As put by Handler (2012) on the topic of introducing PPM: “*Start with a basic, pragmatic, no-frills approach*”. (Handler 2012 p.2)

Familiarity with these concepts is relevant for anyone involved in projects. Therefore, it is also relevant for professionals operating within the field of information systems and/or informatics since IT development is generally run as projects. (Bocij et al. 2008) Also, in today’s business environment, projects across all industries frequently contain IT components crucial for meeting the expected strategic business goals (Papazoglou & Ribbers 2006).

1.3 Purpose and Research Question

Searching for a fitting term with which to describe this phenomenon, *strategic project management* (SPM) was selected. This is appropriate since both *programs* and *portfolios* are considered to be means of *strategically managing projects*. (OGC 2008, PMI 2008, Reiling 2008, Papazoglou & Ribbers 2006) SPM can represent much more than these three concepts and as such, is further explored in the theoretical framework chapter under *Strategic Project Management*. For the sake of simplicity and the lack of a unanimous definition on SPM, the concept is used in this study to represent the concepts of PM, PgM and PPM strategically applied together.

By exploring *the strategic relationship* of PM, PgM & PPM, qualitative findings can be accumulated creating an understanding and an overview of what this complexity generally looks like, resulting in the following, more openly formulated research question:

What is the strategic relationship of project, program and project portfolio management?

1.4 Delimitations

SPM is a vast subject impossible to cover in depth in one report. Due to limitations, the aim of the study is exploratory in nature rather than descriptive meaning that findings and results are not meant to be universally encompassing through *quantity* but instead focus on providing valuable *qualitative* insights on the subject, insights which *may* very well be universally applicable in some aspects. Furthermore, the study does not explore the relationships outside the three SPM concepts towards other strategic organizational management structures.

1.5 Disposition

This *introduction* chapter presents the reader with a *context* and elaborates on the *background and problem* discussion as well as *purpose* to the study. Following thus, the *research question* focused on exploring the SPM relationship is presented. *Delimitations, disposition* and *abbreviations* are added to this chapter in order to further expand the overview of the report and help the reader.

The second chapter provides the *research methodology* selected for answering the question along with the *scientific approach*. Following this the *theoretical* and *empirical* studies are elaborated on.

The third chapter presents the findings of the *theoretical study*, contributing a *theoretical framework* with which to better understand the main concepts and help select appropriate interview questions as well as a *literature review* of major authorities on the subject for addressing the research question.

The fourth chapter presents the findings of the *empirical study* of interviews conducted with experienced professionals from the industry. An *empirical framework* is first provided to understand the *empirical findings* resulting from the interviews.

Presented in the fifth chapter is the *analysis and discussion* of the findings from the two studies.

The sixth chapter presents a *conclusion* of the research question based on the findings of the studies performed and recommends *further studies* to investigate as well as a section on *research critique* and rounded off by a brief *personal reflection* on the process of writing the report.

The seventh chapter consists of the *bibliography*.

1.6 Abbreviations

This report includes many complex abbreviations making it potentially confusing to grasp. To encourage readers, it is recommended to familiarize with the basic concepts of *project* (P), *program* (Pg) and *project portfolio* (PP) as many abbreviations and other concepts relate to these but with added words like “project portfolio management (PPM)”, “project management office (PMO)” or “program manager (PgMgr)” etc.

General:

BPM = Business Performance
Management

BPMN = Business Process Model and
Notation

BPR = Business Process Re-Engineering

EPM = Enterprise Project Management

IS = Information System

IT = Information Technology

OGC = British Office of Government
Commerce

OPM = Organizational Project
Management

OPM3 = Organizational Project
Management Maturity Model

PMI = Project Management Institute

SG = Strategic Goals

SPM = Strategic Project Management

Project:

P = Project

PM = Project Management

PMgr = Project Manager

PMO = Project Management Office

Program:

Pg = Program

PgM = Program Management

PgMgr = Program Manager

PgMO = Program Management Office

Project Portfolio:

PP = Project Portfolio

PPM = Project Portfolio Management

2. Research Methodology

Presented here is the scientific approach of the report followed by descriptions of the theoretical and empirical studies used to collect the required data.

2.1 Scientific Approach

Patel & Davidsson (2003) argues that in a field such as SPM where much is known, a *descriptive* study is better suited than an *explorative* one. However, sensing the vastness of the sources needed to make a truly encompassing universal description of the three related SPM concepts, the descriptive approach was rejected. Instead, *exploring* a functional and comprehensive definition of the strategic relationship seemed more appropriate and manageable due to the academic level of the report and the authors limited previous experience in the field of SPM.

For investigating the chosen research question, a *theoretical study* of relevant literature was chosen as the main research method as it would provide the necessary data to get a grasp of the concepts and also of their strategic relationships. The focus of the thesis was initially supposed to be directed more specifically towards the Volvo IT organization but later changed direction towards a more general and exploratory academic approach because it fit better with the timeframe and available reference literature and other data sources. However, original interviewees from that organization was kept for use in the reports *empirical study*, now contributing as a complementary “reality based” data source which according to Patel & Davidsson (2003) can diversify findings otherwise risking becoming one sided. To further address this diversity, professionals from other organizations were added to the interviews.

The empirical study explored how the SPM concepts were being perceived, applied and structured in a factual organizational context more narrowly and qualitatively while the literature study more broadly yet still qualitatively sought a generally agreed upon notion, thus providing the framework for discussion to match the findings of the two.

By this combination, the study has the potential to add value to both the research field in general by inducting practically anchored knowledge to it and to potential readers from the industry by deducting knowledge from the related theoretical studies referenced (Patel & Davidsson 2003). All in all, reaching the desired validity and reliability which is important for qualitative studies (Patel & Davidsson 2003) such as this, is believed to be achieved by the scientific approach presented.

2.2 Theoretical Study

Literature for the theoretical study was chosen both in the forms of broad-definition textbooks like Papazoglou & Ribbers (2006) and more recently published articles such as Ritson et al. (2011) taken from leading business journals such as the *International Journal of Project Management by APM/IPMA*¹ and *Project Management Journal by PMI*² as well as reports from the *Gartner Inc.* and the *British government P3O*³ initiative and other independent sources. This way, both the latest trends and the common foundations of SPM can be identified and brought forward (Patel & Davidsson 2003). Many of these sources were found to adopt modern aspects of SPM concepts made possible by the extended use of IT making them appropriate for the study since the author's background and institution is anchored in the academic fields of information systems and informatics.

The structure of the theoretical study is divided into two parts. First, the theoretic framework will presents general related concepts. Then, the literature review explores the relationships of the PM, PgM and PPM concepts by consulting three major authorities within the field.

2.3 Empirical Study

A quantitative survey was first considered when the aim of the study focused on finding perceived success factors of SPM development with employees at the case study organization of Volvo IT, but as the focus shifted towards a more explorative and qualitative study, this research method became inadequate. According to Patel & Davidsson (2003), combining quantitative and qualitative types of data gathering techniques can be used to complement each other, giving a truer picture of a case study organization which was also the original intention. As the focus of the study altered, only the qualitative part, the interviews, was kept.

Interviewees were chosen from professionals with relevant experience of the SPM concepts. Some being project leaders while others come from a more strategic decision making background. Data was collected from semi structured qualitative interviews conducted with these persons. The interview questions used was first thought to be based around exploring the notion of the SPM concept but they also evolved to be directed more towards exploring the relationships of the SPM concepts. The interviewees in the study were regarded as general experts, not related or associated to any specific organizational context. This would of course mean that some more junior interviewees only had experience from one organization while

¹ Association for Project Management / International Project Management Association

² Project Management Institute

³ Portfolio, Programme and Project Offices

other more senior could provide a more generally applicable picture of SPM concepts & relationships. In order to mitigate this, interviewees could've been asked how many years they'd been active in the field of project management or be instructed to state the number of organizations they had experience from. But seeing as the aim of this study is explorative and qualitative in nature, all notions of SPM relationships are valuable.

Another heeded recommendation provided by Patel & Davidsson (2003) was that considerable preparations be done before conducting the interviews as well as ensuring the anonymity of the participants and to choose an appropriate degree of structure for the questions, in this case the semi structured approach. Goodwin (2008) provided other valuable insights on research interviewing through her video training sessions such as the importance of being well on time for each interview, finding the right experts to interview, using open ended questions to maximize useful data, neutral phrasing, keeping record etc.

3. Theoretical Study

The theoretical study consists of three parts. The first is the creation of a **theoretical framework** needed to understand the context of the research. The second part is the **literature review** where key sources are examined in order to provide relevant findings. The third part contains **discovered concepts** for further examination in the empirical study.

3.1 Theoretical Framework

The theoretical framework initially explores the general concepts of **strategy, management, process and change**. It then addresses the concept of **strategic project management** followed by general definitions of **project, program and project portfolio management**.

3.1.1 Strategy

The concept of *strategy* is often used in conjunction with other words such as *strategic goals, strategic decision making, strategic planning, strategic project management* etc. Regardless of this widespread use, the meaning of strategy, according to Turban et al. (2011) is to tackle the question of *what direction to take in order to get where we want?* Goals to address with a strategic plan can be either continuous like the police's "*uphold law and order*" or time-constrained like "*decreasing greenhouse gas emissions to 50% in 5 years*". Strategic plans to meet such goals can also mean more fundamental changes to an organization like complete business process re-engineering (BPR) initiatives further described in the following sections. Projects and programs of varying size and scope can be created in order to achieve the time constrained strategic goals of organizations Grundy & Brown (2002). (Turban et al. 2011).

Generally speaking, there are three levels of organizational decision making. *Strategic, tactical and operational*, represented by Figure 3.1 showing the distribution and hierarchy of decision makers within a classic organization, from the many operational to the few strategic. The decisions made at the *strategic level* tend to be long term organization wide while the *tactical level* concerns mid-level resource allocation



Figure 3.1 – Showing organizational decision making levels (Bocij et al. 2008).

and policy making, enabling strategic goals whereas the decisions made at the *operational level* regards daily short term activities. (Bocij et al. 2008) Being able to make high quality decisions within an organization strongly affects successful management across all fields, thus also the SPM concepts explored in further detail later in this study.

3.1.2 Management

According to Bocij et al (2008), an old but still frequently used citation regarding the concept and notion of management was coined by a French mining engineer in June of 1900.

“To manage is to forecast and plan, to organize, co-ordinate and to control.”

Henri Fayol (1841-1925)

The concept of *management* in this study relates to the practice of successfully executing strategic plans by the use of different types of projects, generally referred to in this report as the concept of SPM which encompasses PM, PgM and PPM. The realization of strategic goals is not always granted just because a plan has been formed, stressing the importance of successful management for strategic fulfillment (Jacobsen & Thorsvik 2008).

The characteristics of management illustrated by Fayols declaration as well as the common notions of management activities are dependent upon access to appropriate information in order to make high-quality decisions (Bocij et al. 2008). Managers cannot make accurate plans, monitor progress or make efforts to control without being well informed before taking action. This need for information is also illustrated by the existence and continuous development of “best practice” knowledge surrounding the SPM concepts themselves, describing how to make high-quality decisions for the roles relating to each concept. One of the enablers behind this continuous development of management models are the new possibilities of decision support and business intelligence provided by the use of complex IT solutions such as data mining & warehousing and business performance management allowing managers to be more aware and well informed (Turban et al. 2011).

Business Performance Management (BPM) is another concept appropriate to mention since its characteristics align well with the strategic perspective of the study. It can be defined as a set of integrated processes for management and analysis enhanced by technology concerning economical and operational activities. It measures strategic goals against performance by key point indicators. The concept of BPM encompasses many different methods for this strategic alignment, many of which are focused towards improving organizations business processes, Six Sigma and Lean to name a few. (Turban et al. 2011)

3.1.3 Process

The word *process* has many uses throughout society. In an organizational strategic business context it is commonly referred to as *business process*, encompassing definitions are hard to provide since it depends on the chosen approach and nature of the organization and the particular business process in question (Ljungberg & Larsson 2012). One common definition could be that a process is a set of connected activities transforming input (resources such as material, investments and working hours) into output (commonly products and/or services) (Turban et al. 2011). Described in essence by *Figure 3.2*, using *business process model and notation* (BPMN) language, business processes are generally much more complex than this.

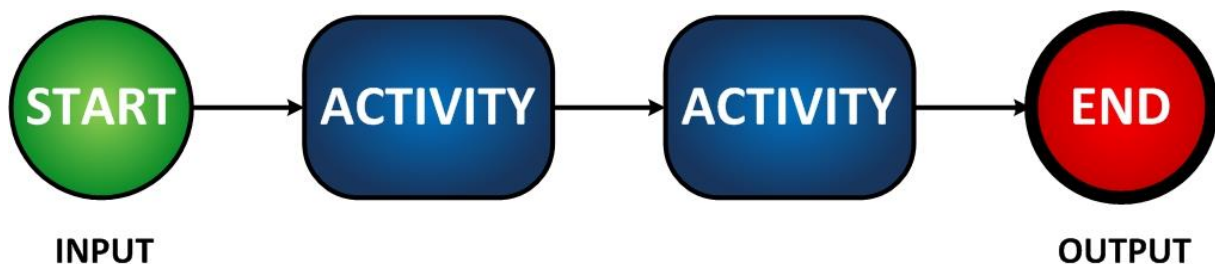


Figure 3.2 – Showing a process transforming input into output using two linked activities.

One of the reasons for adopting more and more process-centric strategies and organizational models are the possibilities made available by the use of IT solutions enabling processes to be coordinated across geographic and organizational boundaries reducing bottlenecks and enabling better management throughout entire value chains (Papazoglou & Ribbers 2006, Ljungberg & Larsson 2012, Jacobsen & Thorsvik 2008). All the SPM concepts have their own related processes, whether it is a process describing how to assess the risk of a new project or a process designed to standardize communication on progress within a program of several projects. Being aware of the concept of the business process is also important since on many occasions, strategic plans are realized through projects or program initiatives aimed at restructuring, improving or forming business processes relating to daily operations.

When following a strategic plan and managing a project aimed at optimizing a business process, success can mean the achievements of said goals but can also have other unforeseen effects resulting in change. This change can be what the project was aimed at achieving or it can be a side effect of a process restructuring effort. Never the less, organizations must seek to anticipate and manage this change in order to avoid failures and be successful. (Ljungberg & Larsson 2012)

3.1.4 Change

Change describes the development (progression or regression) of an organization and can be extremely multidimensional, whether reactive or proactive, immense or diminutive, cultural or technical, change in an organization can have many different reasons and mean many different things (Jacobsen & Thorsvik 2008). Selected for investigation in this report is the change resulting from strategic initiatives such as projects & programs and therefore focuses on the conscious decisions made by managers to ensure organizational readiness in union with the successful realization of said projects & programs.

An organization consciously seeking to manage the change expected to result from a development project can be said to go through three stages, *prepare*, *perform* and make *permanent* (Ljungberg & Larsson 2012). Firstly, the grounds are *prepared* for the coming change by raising awareness across the organization of why this change must come about as well as to how things will change. The people within must be made part of the change by setting goals and communicating the change not only from an internal perspective but also by communicating external demands from customers or competition. Secondly, *performing* the change must be rapid and clearly focused as to emphasis benefits of the new ways. Training and delegating tasks must involve as many people as possible so as to get everyone on board and part of the change. Thirdly, to secure a *permanent* change, organizations must make sure the change is not reversible by supporting it through stimulating cultural efforts and rewarding good behavior. If the focus of the change concerns organizations business processes, the organizational structure must be changed to match. As the quality of decision making improves with new technology and methodology, organizations change to keep pace with this development and boundaries are smoothed out as they adopt more process centric management approaches that address issues across entire supply chains. (Ljungberg & Larsson 2012)

According to Papazoglou & Ribbers (2006), performing SPM, especially PgM, also relates to managing the organizational change resulting from projects. A common theme relating to this is that of the *change agent*. This kind of person fulfills the part of driving change in relation to PgM but the role is open for everyone involved in a “change projects”. (Papazoglou & Ribbers 2006) This relates to SPM in general as it addresses both the responsibilities for the individual managers at the different levels but also the general PM, PgM and PPM methodologies since they need to sponsor the concept of cultivating the change agents function.

3.1.5 Strategic Project Management

Strategic project management is used throughout this report to represent the concepts of PM, PgM and PPM grouped together and related through the strategic goals they share. However, as seen in many sources, these concepts and notions are often confused or mixed up (Reiling 2008, Papazoglou & Ribbers 2006, Artto et al. 2009, Görög 2011, Ritson et al. 2011). As such might also be the case with SPM, this section was included to further investigate the concept and what it stands for.

While searching for definitions, the concepts of *enterprise project management* (EPM) and *organizational project management* (OPM) also came up sharing similar meaning and characteristics as the SPM concept used here. However, these two were claimed by organizations for use in their own methodologies. The notion of these three concepts amongst professionals was further explored in the interviews.

The SPM concept is used in a book by Grundy & Brown (2002) and defined as:

“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 & Brown (2002, page x)

This definition seems to work well with the approach adopted for this report as Grundy & Brown also talks about the benefits of using programs and portfolios. However, their focus lies more in the development of traditional PM, which they have identified to be ‘deficient’, into SPM in an attempt to lay claims to the concept and definition as presented in their book. As such, even if the definition cited above matches our approach, SPM by Grundy & Brown (2002) is more focused towards PM than towards PgM and PPM. Yet, seeing as PgM and PPM are made up of projects, it seems like a sound approach even if the concept of SPM is used on a more superficial level in this report.

Another take on SPM is presented by Professor Sebastian Green (2002) of University College Cork, Ireland. He identifies the trend of adding the word “strategic” to general concepts since *“It sounds better, more important, more professional and, of course, more valuable”* (Green 2002, p.2). He goes on to ask what the concept means and what the difference between regular PM and SPM is, concluding that a preferred view would be *“the management of projects in such a way as to develop competencies and capabilities, which contribute to the firm’s sustainable competitive advantage”* (Green 2002, p.2) citing several sources agreeing

upon this such as Porter 1987, Prahalad and Hamel 1990 and Stalk, Evans and Schulman 1992. This is further explained by emphasizing a focus towards individual leadership skills for project managers which will add knowledge, spanning the boundaries of strategic levels instead of simply focusing on the knowledge of how to deliver results thus enabling a *sustainable competitive advantage*. This view of sustainability is lacking in major contemporary methodologies describing strategy and projects according to Green (2002), for example the Project Management Institutes *organizational project management maturity model* (OPM3) because they use outdated views of strategy if they at all define the term. Green means that calling something that supports the fulfillment of strategic goals ‘strategic’ and something which does not ‘ordinary’ does not make any difference. To be truly strategic an organization need to evolve from simply following the ‘best practice’ approach of strategic planning followed by actions to execute those plans. It needs to develop its human resources creating tacit knowledge, much like the composer writing beautiful music or the artist skillfully painting a portrait, individual leadership is the skill for organizations to cultivate and learn how to manage for true sustainable competitive advantages. Simply following the rules of the “best” strategic management methodologies available to all competitors is neither sustainable nor competitive. A focus on promoting star project leaders willing and able to break the rules and boundaries of an organization and communicate with people across all levels in order to get things done is what SPM is about, or at least what it should be, according to Green (2002).

Finding that the confusion surrounding SPM can be much more than differing rules and concepts or mapped out relations brings an interesting dimension to the following investigation of the three concepts of PM, PgM and PPM not foreseen. This was a valuable insight to reach before conducting the interviews and shows that the strategic relationships between PM, PgM and PPM are not necessarily rigid and rule based relationships but can also be more loosely coupled and defined by the individual leaders and their personal *informal relationships* in each unique situation.

3.1.6 Project Management

Most sources agree upon the definition of projects as time constrained efforts with objectives to achieve and a defined set of resources to spend (Archibald 2003). Illustrating this is the commonly found project pyramid model as shown in *Figure 3.3* balancing the three key defining factors which are time (set start and end date), money (resources, people) and scope (what is included in the project). There are countless variants to this model but the basic idea is to represent the

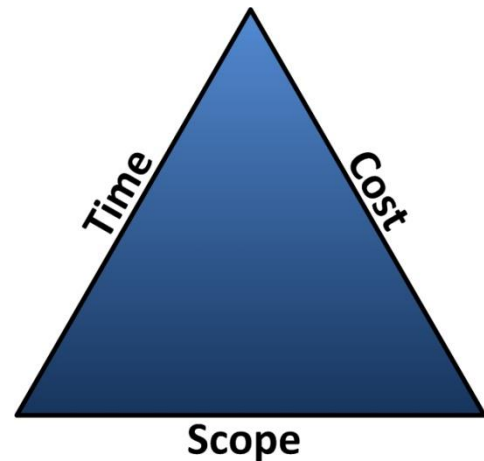


Figure 3.3 – Showing the commonly used project pyramid of time, cost and scope.

balance of the factors affecting each other. This means if money is cut to a project then scope might decrease as there are not enough resources to work on the project or time might also increase since less people are expected to do more.

The five activities or processes commonly associated with PM are *initiating*, *planning*, *executing*, *controlling* and *closing* (Frankk 2012). *Initiating* is where definitions of what the project is set to achieve is explored and decided upon by gathering stakeholder expectations and deliverables for each project activity. The *planning* phase is where a more detailed plan is formed describing a rough estimate of all activities with their cost, timeframe and how the tasks relate to each other. *Executing* means assigning resources to each activity and start working. A team is assembled to perform this job. A project manager must have some measure of knowing where the project is heading and as such will *control* the project continuously in order to reallocate resources and priorities to help the project stay on course. *Closing* a project requires a final analysis on whether or not the project reached its goals on time and within budget constraints as well as the delivered product. (Frankk 2012)

Clear strategic goals linked to organizational development and process improvement is seen by Ljungberg & Larsson (2012) as a prerequisite for being competitive and ready for future challenges and in order to succeed in organizational development, structuring this work as well managed projects is a success factor. Adding to this, PM is often said to be important tools for strategic goal realization according to Morris & Jamiesson (2005). Projects represent the efforts taken to get from where we are to where we want to go and the management structure shows us the way to get there (Ljungberg & Larsson 2012). PM being prevalent in virtually all organizations, the approach and methods chosen can differ greatly, as can the use of the PgM and PPM concepts presented in the following two sub chapters.

3.1.7 Program Management

According to Archibald (2003), programs are generally defined as long running projects or endeavors encompassing multiple smaller projects which are all correlated in some way, usually with a focus on delivering business value. Programs tend to focus on strategic business goals and thus needs sophisticated review and progress feedback systems for it to work. Usually, a program has a different phase structure compared to projects depending on its scope and initial activities (Papazoglou & Ribbers 2006). There are other terms for programs as well; Ljungberg & Larsson (2012) for instead refer to the term “Umbrella Project” as an overarching concept consisting of multiple subordinate projects. The definition however is similar to the one presented above by Archibald (2003).

Consulting Papazoglou & Ribbers (2006), key elements (*italic*) of programs were found. The program *organization* reflecting the complexity of the program and as such, this model varies depending on each situation. It commonly includes the role of the program manager responsible for delivering results to match the strategic goals. The program sponsor maintains connections with senior management and the steering committee comprised of stakeholders makes decisions. *Policies* are another element controlled by the steering committee charged with cost and time management. These tend to be loosely defined at program start up moving to tighter restrictions later on. Program *plans* are needed to manage resources and competencies as well as coordinating its implementation. It is simply not possible for large organizations to for instance train all of their personnel at the same time on new procedures when implementing a new enterprise wide information system. *Communication* is a key factor since programs affect multiple levels within an organization resulting in a need for everyone to know what is happening and what might change is crucial for success and creating a welcoming atmosphere for the said change. *Alignment* must be done to bring initiatives in line with strategic goals, foremost by extensive reviewing built into the structure of the program and entrusted to management functions. Papazoglou & Ribbers (2006)

A study by Morris & Jamiesson (2005) identifies PM as more dynamic than might be portrayed in literature, representing larger initiatives implementing corporate strategy and/or organizational change nevertheless arising from temporary needs and many times organized by the leadership teams in charge without a predetermined uniform structure to implement. The study also found that sometimes, the *project portfolio* (PP) term was used to describe the program concept briefly explored above. This further illustrates the complexity and confusing nature of these concepts.

3.1.8 Project Portfolio Management

As just seen, the PP and Pg concepts can be somewhat confusing. Furthermore, the study conducted by Morris & Jamiesson (2005) came across two definitions of PP. The first one (used mainly throughout this report) is that a PP consists of an organizations' collected projects and programs and that PPM represents the processes of evaluating and deciding on selecting the right projects and general balancing of the portfolio much like in economics. The other view was that project portfolios consisted of similar projects or projects of related theme which is close to the definition used for programs in the research question of this study.

Handler (2012) suggests six basic processes for PPM much like the ones presented for PM earlier starting with a focus on *stakeholders* and what they define to be success or failure. With this analysis it becomes clearer what needs to be done to guide the portfolio towards success and to lay the foundations for the next process. This concerns the creation of a *government body* for the PP including roles possessing the mandate to make decisions on approving and cancelling projects to achieve a balanced portfolio. Next, a *portfolio plan* must be created in conjunction with *the government body* and *stakeholders*, reflecting the organizations strategic goals as concrete portfolio objectives concerning decision criteria and investment categories. The *plan* must also include the structure of the portfolio or portfolios in larger organizations. Next is *information gathering* on the current programs and projects as to enable effective monitoring, thus creating decision support. Data from future projects, both planned and considered needs also be available to provide decision support to the government body. *Follow up* on the performance of the projects monitored related to the objectives formulated in the *portfolio plan* then analyzes project progress and compare it to the predicted progress, making note of any divergences and present them to the *government body*. Finally, *changes* are made to fit projects to the *project plan* based on the facts generated by the entire process. Handler notes that political and personal tilts may affect the decisions taken but having a solid fact-based material improves sound decision making at this point. After agreement has been reached on resource redistribution within the portfolio, the appropriate actions can be taken.

PPM relates to PgM and PPM strategically (in the organizations who use it) since it has the mandate to approve, cancel and alter these initiatives. This hierarchical connection benefits from being more developed according to Morris & Jamiesson (2005) promoting an enterprise-wide business model encompassing process for PM, PgM and PPM, ensuring continuity, understanding and fulfilling of an organizations strategic goals.

3.2 Literature Review

To address the research question this study consults three major authorities on the field heralded by a brief over-viewing article by **Reiling** followed by a selected report from the **Gartner Corporation** continuing with the British Governments **P3O** guide and finally, the project management institutes **OPM3** standard.

3.2.1 Reiling 2008

In the article by Reiling (2008), explanatory efforts are made to distinguish between the concepts of PM, PgM and PPM. He identifies the need for clarification seeing as the concepts are frequently confused and sometimes wrongly used to describe each other. The relationship between the concepts is further likened to that of a pyramid hierarchy as shown in *Figure 3.4* where PPM sits at the top encompassing all the programs and projects prioritized by strategic business goals. At the middle level we find PgM containing clusters of related projects grouped by sharing the same strategic business goals. PM is at the bottom of the pyramid and while several projects can form programs, individual projects can also be part of the portfolio, the difference being that they are strictly tactical in nature and not strategic.

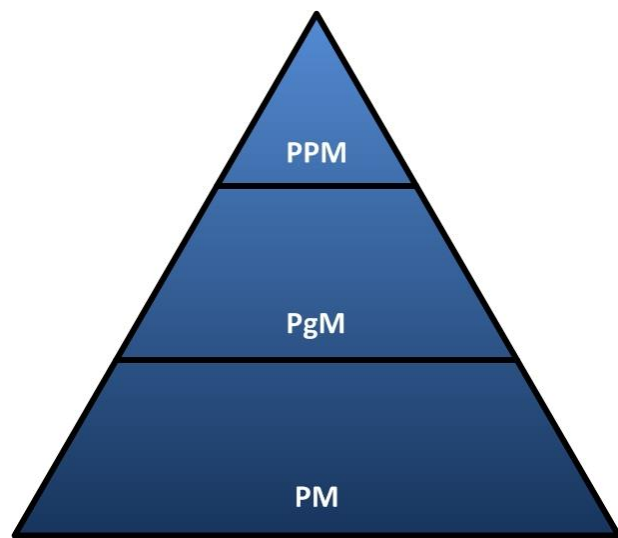


Figure 3.4 – Showing a pyramid hierarchy of the PM, PgM and PPM concepts (Reiling 2008).

Reiling further goes on to describe the three concepts in more detail by distinguishing PPM as “a process that is clearly characterized by business leadership alignment” (Reiling 2008, p.1) and thus linked to strategic objectives, PPM concerns balancing risk and reward by selecting programs and projects to match these objectives. PgM is defined by its immediate connection to business goals being measured by their fulfillment. Synergies through combining related projects within them can be achieved and as PgM operates across the whole of an organization combining many projects; it is more oriented towards general management while PM relates primary to its ability to deliver results. Driven indirectly by strategic plans but differing from programs, they do not possess the strategic ownership of these goals. PM is about implementing a tactical plan based around a local time and cost frame instead of being measured towards the fulfillment of strategic goals.

To conclude, Reiling (2008) suggests a number of key factors to consider in implementing PM, PgM & PPM which is of concern to this study since it reflects the SPM relationships looked for. The relationship between the concepts is easily distorted by organizations lacking in structure. Larger organizations call for more structure and as such, *organizational size* is of importance for successfully defining and anchoring the three concepts within an organization as well as defining what the general communication and exchange between them should look like. Another key factor is *operational breadth* which primarily affects PgM. An organization with narrow operations is easier to manage than a broader with several horizontal functions, and as PgM will most likely involve several of these functions it must bridge the gaps between them. Finally, *strategy* will undoubtedly affect the structure and relationship of PM, PgM and PPM as in some cases, complex strategic alliances between organizations might occur calling for structure and management to make this collaboration work.

3.2.2 Fitzgerald & Apfel 2009

Accessible for students via the Gothenburg University website, the Gartner Corporation is the world's largest IT research and advisory firm (Gothenburg University 2013). Browsing through Gartner available research, one search criteria suggested is based on selecting a role for which to find relevant results. One such role is *program and portfolio management* which was selected for this study leading to the finding of the article by Fitzgerald & Apfel (2009).

Fitzgerald & Apfel (2009) describes a number of roles and offices used in conjunction with the PM, PgM and PPM concepts. By exploring the functions of these roles and offices, insights may be gained as to their interrelationship. First, presenting the authors definitions of the core concepts are in order. PM is about applying skills and tools to drive activities towards meeting the project requirements; PgM deals with coordinating multiple related projects sharing synergetic benefits and finally PPM concerns governing and balancing the portfolio of projects and programs. Initiatives to structure the relationships of PM, PgM and PPM usually begin at one of these levels by instituting over-arching management roles or offices much depending on organizational size and the particular conditions. The five suggested roles are:

Senior Project Leader – This role usually exists in smaller organizations and represents the most experienced project manager. As these organizations strive to develop their PM into PgM and PPM it's usually this role that gets put in charge of the initiative having earned the reputation and credibility needed to bring the business together. Responsibilities involve mainly driving the development and communicating with all involved.

Program Manager – Comes into play as organizations decide on running their first large programs thus needing someone to manage the undertaking. Doing this often requires the program manager to be widely competent and knowledgeable enough to bring together the stakeholders from different parts of an organization, consequently also requiring good personal skills. Responsibilities include planning and managing risk as well as change.

PMO Leader – The PMO is described as a business unit created to manage projects, programs or portfolios and its definition consists of different responsibilities depending on what organizational context it is applied in. However, the position of PMO Leader typically involves training and education, developing methodologies, quality controlling and managing the organizations knowledge on the project, program or portfolio or a combination of these.

Portfolio Manager – Managing a portfolio is, unlike projects and programs, a constant task requiring its manager to consider and evaluate new proposed project or program and continuously monitor existing ones and communicate the portfolio content to involved parties as well as constantly adapt the portfolio as necessary to meet demands from business change.

Resource Manager – Ensuring resources are available before project/program launch has been found to be beneficial instead of going ahead with understaffed projects, allocating resources when made available. Responsibilities include career issues, recruitment and managing bottle necks that may arise as crucial expertise is moved from different projects.

PMO Support Staff – Including system administrators and project analysts whose task it is to support the different range of functions of the PMO and the role of the PMO leader.

Fitzgerald & Apfel (2009) recognizes that the concept of the PM, PgM and PPM offices are unclear and easily confused seeing as every organization applies them differently. A definition attempted in the article describes *program offices* as related to a single program and *program management office* as related to a permanent function, managing multiple programs. The *project management office* is defined as serving multiple projects or programs with method and tool support. In general, the concept of the PMO can encompass one or several of the three concepts investigated, although rarely both PPM and PM/PgM functions together.

Fitzgerald & Apfel (2009) presents no conclusions but to summarize key point, it can be said that PM, PgM and PPM are partially related through certain *roles* and *offices*. The way this relationship looks depends on many things, *organizational size* and any chosen *organizational methodology* for strategic management of projects being two factors identified.

3.2.3 British Office of Government Commerce 2008

Published by the British Office of Government Commerce (OGC), *the portfolio, programme and Project Offices* (P3O) guide was created in 2008 with a purpose to provide a universal manual; mapping principles, processes and techniques helping organizations and individuals to succeed in their efforts to institute a framework for PPM, PgM and PM. (OGC 2008) The manual describes the creation of a business support structure for the PPM, PgM and PM concepts which is helpful not only for developing organizational strategy but also for implementing it, making the P3O a suitable source for exploration in this study.

As with the other sources selected, OGC (2008) presents a short definition of the three main concepts, defining PPM as strategic processes for balancing every day operations and business change, considering the impact of projects and programs on the organizations operations and weighing the risks, costs and strategic benefits of each initiative. PgM is about realizing strategic objectives by managing and coordinating several grouped projects. Final, OGC's description of PM practices are directed towards a method called PRINCE2. Briefly explained by Bocij et al. (2008), PRINCE2 stands for *projects in controlled environments* and focuses on business justification, organizational structure for the roles involved, product planning, clearly divided stages and flexibility. The method consists of several useful roles, tools and practices not further explored in this report.

Emphasized in the guide is the PM, PgM and PPM concepts primary function of delivering desired change to an organization, illustrated by a relationship between *business operations* representing every day work and *business change* as inspired by projects and programs. The P3O recognizes the need for offices to coordinate and manage the efforts of PM, PgM and PPM. Identified as a key component in the guide, these offices however have no unified structure as each organizational context will result in different distinctions and functionalities assigned to the single or multiple offices created. This is shown by the many figures in the guide showing examples of different structures with either permanent or temporary project, program and portfolio offices, reflecting organizational maturity. P3O makes no judgment on which model is the best but present a number of them, elaborating on which type of organization each may represent and work well within. For organizations to know which model suits them best, bringing structure and a clear view of the relationships and links between strategic goals and operational practices is identified as an underlying objective for successfully implementing the P3O processes. As described above, many variants exist of P3O structure and a generic model of PM, PgM and PPM organization can be valuable as a

starting point for developing P3O illustrated by *Figure 3.5*. The figure describes general roles and responsibilities for a suggested structure, describing decision makers and relationships between different units. Using this model can help organizations get a notion of the stakeholders involved and the potential communication channels as well as who is accountable for the governance of each unit.

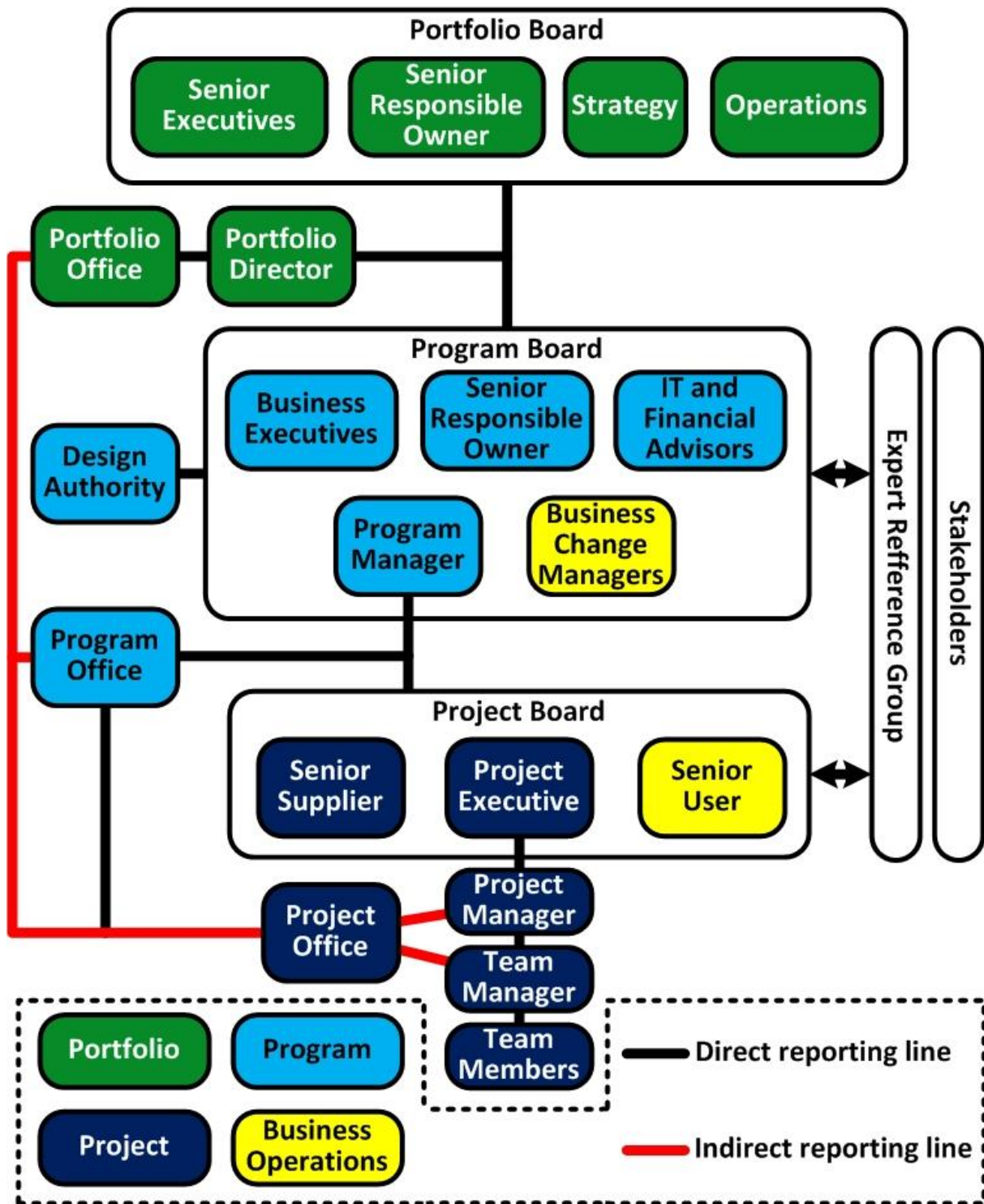


Figure 3.5 – Showing a generic P3O organization related to PM, PgM and PPM (OGC 2008).

In order to develop the model to fit specific organizations, a couple of factors are presented which will eventually affect the way P3O is structured. The first to consider is *roles and sizing*, done by defining the position of the three offices or the joining of any of them, deciding their functions more closely. Next, these functions and those of the three boards result in a number of roles and staff services needed to operate the functions. The second factor concern the *relationships* of the P3O model towards the rest of the organization by complying with the standards and processes used in the model. While doing this it is important to be aware of the impact it can have on other parts of the organization, agreed upon with those concerned beforehand and then managing these changes as they arise. *Culture* is the third factor affecting the P3O model and as such needs to be defined. A couple of characteristics to consider are information sharing, learning focus, avoiding a blaming attitude, activities are value focused, innovation, service focus and proactive analysis to name a few presented by the OGC (2008). Also, when implementing P3O the current organizational culture must be understood and so the P3O model must be adapted to harmonize with the existing culture. An example given by the OGC (2008) involved a way to slowly implement new procedures when a new office was created to formalize processes. The new office invited key personnel from the units they wanted to reform and had them create a solution together instead of forcing it upon them.

Concluding what findings have been gained from exploring the P3O guide, it illustrates the diverse strategic relationships between PM, PgM and PPM depending on each *organizational context*. The impact of *organizational culture* adds an interesting dimension to the otherwise structured and role bound approaches and efforts to define the SPM relationships

3.2.4 Project Management Institute 2008

The *Project Management Institute* (PMI) is an international non-profit organization with a focus on providing its more than 700,000 members with high quality resources for the project management profession. PMI provides globally recognized standards and certificates as well as research programs and development prospects for professionals. (PMI 2013)

The *Organizational Project Management Maturity Model* (OPM3) was created by PMI to further expand the topic of PM and to also include PgM and PPM. PMI (2008) describes it as:

“A framework that defines knowledge, assessment, and improvement processes, based on Best Practices and Capabilities, to help organizations measure and mature their project, program, and portfolio management practices.” (PMI 2008 **Glossary 2.Common Acronyms**)

One of the benefits listed in the OPM3 guide is *the strengthening of the link between strategic planning and execution via projects*, a benefit which directly relates to this study's research question. The OPM3 guide is vast and covers many topics which are not sought as reference for this study. Hence, the parts explored in more detail concern topics related to the strategic perspective adopted in this study. Early on in the chapter titled *Strategy Execution*, the relationships between strategy, PM, PgM and PPM execution is explained briefly as projected by *organizational governance* as the driving force. OPM3 has incorporated best-practice models for *organizational government* structure which when applied will support the fulfillment of strategy. Shown in *Figure 3.6* is a model representing a typical organizational environment confirming the basic strategic relationships of PM, PgM and PPM.

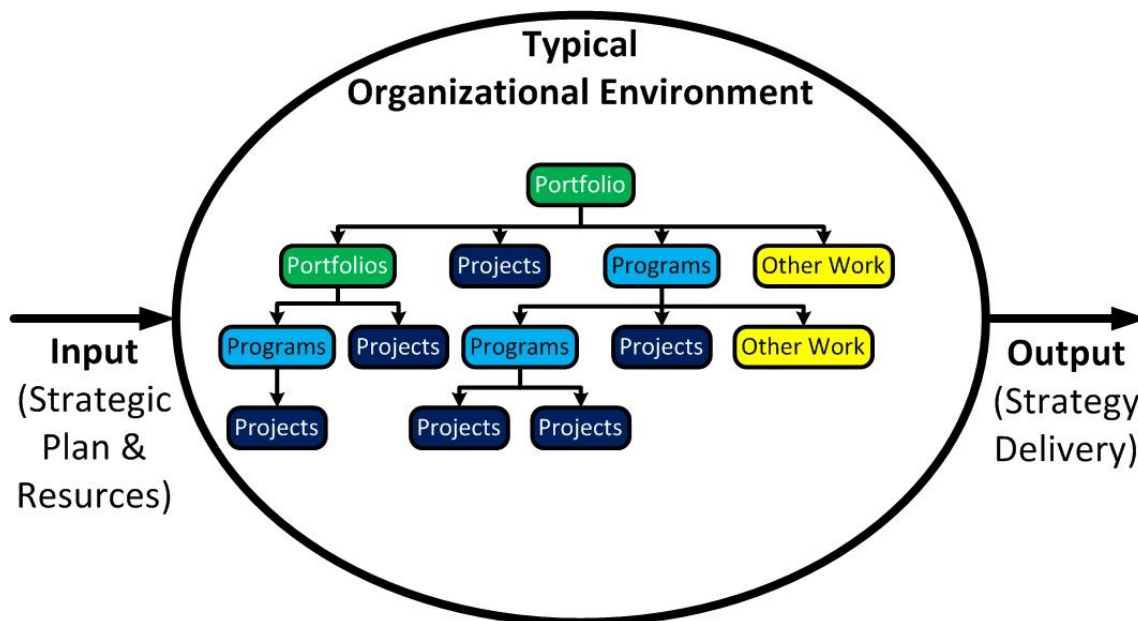


Figure 3.6 – Showing a typical organizational environment (PMI 2008).

While the figure above confirms basic strategic relationships between the concepts, there is more to learn on how the management functions of projects, programs and portfolios relate.

Further investigations identified the acronym of PPP, used to describe the concepts of project, program and portfolio together. This however cannot be said to be the same as SPM, OPM or EPM which focuses more on the management aspects of these three concepts.

PMI (2008) further suggests a structured management approach towards the PPP concepts adapted towards three key factors; *organizational size, industry type* and *culture*. These are recognized by many other sources and as such may be important findings related to the answering of this reports research question. Additional examining of the OPM3 resulted in the

findings of the *organizational project management* (OPM) concept itself, defined as the systematic alignment of projects, programs and portfolios towards organizational strategy thus more reflecting the relationship of the management concepts explored in this report. The implementation of OPM requires a certain *organizational maturity* and efforts within the OPM3 guide describe how to achieve this, one example being the instituting of a project management office (PMO) to enable spreading the OPM method throughout the organization.

Concluding the OPM3, its characteristics is that of a resource guide for organizations wishing to adopt a model for managing strategic objectives through applying programs and portfolios to better handle their projects and change initiatives. Findings on the PM, PgM and PPM relationship can be seen in the overarching concept of OPM with its link to organizational maturity meaning that in order to implement the concept of PPP; an organization must have reached a certain level of development. The strategic relationship of PM, PgM and PPM is therefore dependent on an *organizations maturity* and so, might not be relevant for smaller “less mature” organizations where PgM and PPM is not needed.

3.3 Discovered Concepts

As the theoretical study comes to an end, a number of new concepts have been identified and selected to be further explored in the empirical study.

- From the *Strategy* subchapter, **strategic goals** were found to be a relevant foundation for SPM relations.
- *Management* explored the new possibilities of **information technology/systems** enabling better decision making.
- *Process* gave insights of the increasing process centricity within organizations and so the concept of the **process** can describe both general business processes and the processes involved in PM, PgM and PPM itself.
- *Change* described what happens as a result of SPM initiatives and identified change agents as key roles, often **managers** related to the SPM concepts. Not to mention the **informal relationships** arising if the cultural aspect is not managed.
- *Strategic Project Management* found similar concepts such as **enterprise project management** and **organizational project management**. These two along with **strategic project management** present concepts to explore further. Furthermore, **informal relationships** were identified to be success factors of SPM
- *Literature Review* resulted in the exploring of models and roles associated with the SPM concepts, the **management office** found to be significant to relationships.

Commonly within this field, the same abbreviation both spoken and written can represent several different phenomena, potentially causing confusion. For example “PM” is frequently used to represent both the concept of **Project Management** and the role of **Project Manager**. Similarly, “PMO” can represent the **Project Management Office**, the **Program Management Office** or the role of **Project/Program Management Officer**.

For the sake of clarity, the concepts identified in the theoretical study were made into a list used throughout the empirical study. This list was presented earlier in the section titled *Abbreviations* and is more concretely presented within an application context in the empirical framework following in the next chapter. The creation of the list was necessary in order to create the models in the empirical study as well as for clarification efforts on this frequently confusing topic and mixed up concepts.

4. Empirical Study

The empirical study consists of two parts. The first shows the creation of the *empirical framework* used to prepare and plan for the interviews. The second part presents the *empirical findings* where each interview is summarized and presented.

4.1 Empirical Framework

Interview questions were selected as to compare with the findings of the theoretical study. Four were chosen considering time limits for interview durations, however they were formulated to invite and encourage elaborate answers. The first two address the notions of key concepts which by defining them also say a lot about the way they relate to each other, thus contributing to answering the research question. The second two were more directly linked to describing the relationships where interviewees were asked to create a model to describe their comprehension of the subject. When the interview was started, subjects were presented with a 45x60cm whiteboard containing magnets of different color with white labels on them representing *central concepts*, *roles* and *supporting concepts* as shown in *Figure 4.1*. The interview was recorded with consent on a dictating machine for subsequent analysis.

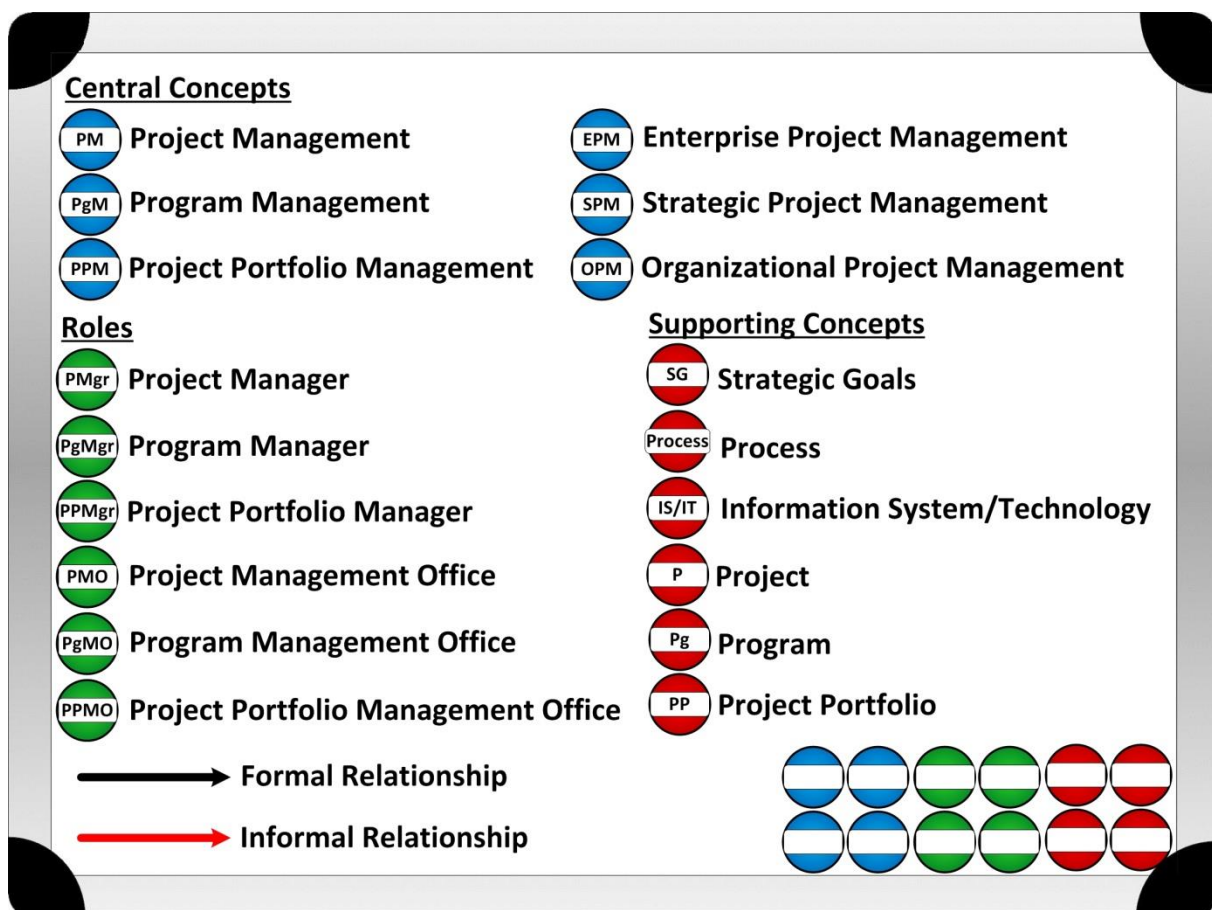


Figure 4.1 – Whiteboard displaying the concepts selected for investigation in the interviews.

The **first question** regarded the six central concepts, the first three being the PM, PgM and PPM while the other three were SPM, EPM and OPM. These last three being of a similar nature; it would be interesting to hear what the interviewees had to say about them representing or encompassing the relationships of the three earlier central concepts as found in the literature. Interviewees were asked about their comprehension of these concepts.

The **second question** focused on the PMO, the PgMO and the PPMO, offices concerned with administrative functions. This question was chosen since in the literature it is unclear which of these offices usually exists within organizations and what their function is, having found multiple sources suggesting different answers. Interviewees were asked about their comprehension of these concepts.

The **third question** selected was significantly different since in it, interviewees were asked to create a *formal* model of the PM, PgM and PPM strategic relationships on the whiteboard and were given a black pen to represent these relationships. The interviewee was instructed to include the *strategic goals* (SG) as a starting point since this would represent the strategic element found to exist in all organizations. They were also encouraged to remove any magnets they thought were unnecessary or which they were not familiar with. They were further instructed to add any concepts or roles they saw fit to describe this relationship, and to draw symbols and figures of their own or write text to describe their model. Finally they were asked to think aloud and describe what they were doing while they were asked clarifying questions by the interviewer when need arose. This question would provide a model of the relationships, much like the ones found in some of the sources of the literature review.

The **fourth question** was asked in order to identify the *informal* relationships in the previously created model seeing as this was identified in the section on *Strategic Project Management* to be the true source of strategic competitiveness. Interviewees were given a red pen to represent these relationships.

These four questions were not sent in advance, the interviewees were only aware that the topic was related to “the strategic management of projects”. The findings of interviews conducted in this way present a spontaneous result and a picture of what the strategic relationships of PM, PgM and PPM can possibly look like. The resulting discussions also contributed many additional insights within the general field of SPM not directly related to the research question or anticipated by the author. Only representatives from two different organizations responded to the interview request limiting the scope of the study somewhat.

4.2 Empirical Findings

Presenting the findings of each question from the four interviews as well as models created.

4.2.1 Interview 1

Asking the **first question** on the familiarity and notion of the EPM, SPM and OPM concepts, the interviewee was not particularly familiar with any of them as they were not used regularly in practice according to him. He was however familiar with PM, PgM and PPM and agreed on the general definitions presented earlier in the literature study but also described the roles of the *steering committees* making decisions above the project managers (PMgr) as important actors though these were not added as concepts. PPM was described as associated with strategic decisions on new projects and initiatives managing risk, change and financial issues.

Another interesting topic that came out of this was the difference in language used between English and Swedish (the language of the interview). From the interviewees experience when educating project managers, two different aspects of project management were usually discussed. The “hard” part represented by *project control* (swe: *projektstyrning*) concerning organization, structure and method. And then the “soft” part of *project leadership* (swe: *projektleddning*) where the ability to lead and motivate people is the focus. This was an interesting finding as in English; all of this is generally encompassed in the PM concept giving rise to a lot of debate what PM is about (see the two articles on 12 in the theoretical study). The interviewees own reflection was that it mostly depends on organizational culture what this balance looks like promoting the approach of “lagom”, translating approximately to: *balanced and appropriate according to the situation, not too hard and not too soft.*

In the **second question**, the interviewee recognized PMO and PPMO but not PgMO stating that not all organizations run programs and those who do seldom have a dedicated office just for programs. An example given was that a program can also be run by senior management, for example the IT managers of an organization can run a program focused on IT development, encompassing a number of projects aimed towards this goal. The PMO handles common project methodology, the project model and also not uncommonly the project portfolio also making the PPMO redundant, although in larger organizations there can be separate PPMOs as in reality, handling the project portfolio and the project model and methods are two completely different things. One PPMO the interviewee had experience of consisted of two managers responsible for a large organizations PPM.

The **third** and **fourth question** encouraged the interviewee to create a model (see *Figure 4.2*) of the strategic relationships, *formal and informal* between the PM, PgM and PPM concepts. First the three encompassing concepts, asked about in question one, were removed seeing as the interviewee had no experience of using those. Then the PgMO was removed since this office, as seen in the previous question, had not been encountered. Finally the IT/IS concept was removed due to it usually only concerning PM and thus not used strategically in the interviewees experience. Two new concepts were added describing informal *internal & external* sources potentially affecting management on all levels.

Starting with the SG, these dictate the agenda of PPM. However, what strategic objectives end up inside the project portfolio (PP) does not always come from formal sources as these are usually set once or twice a year and urgent unforeseen *external* or *internal* problems and opportunities may arise which directly needs to be addressed by the PPM if there is time. If not, these issues might have to be dealt with directly by PM causing some disturbance in regular proceedings and the original project plan as new procedure is forced upon the project. These *informal relations* of external and internal factors are represented by red arrows.

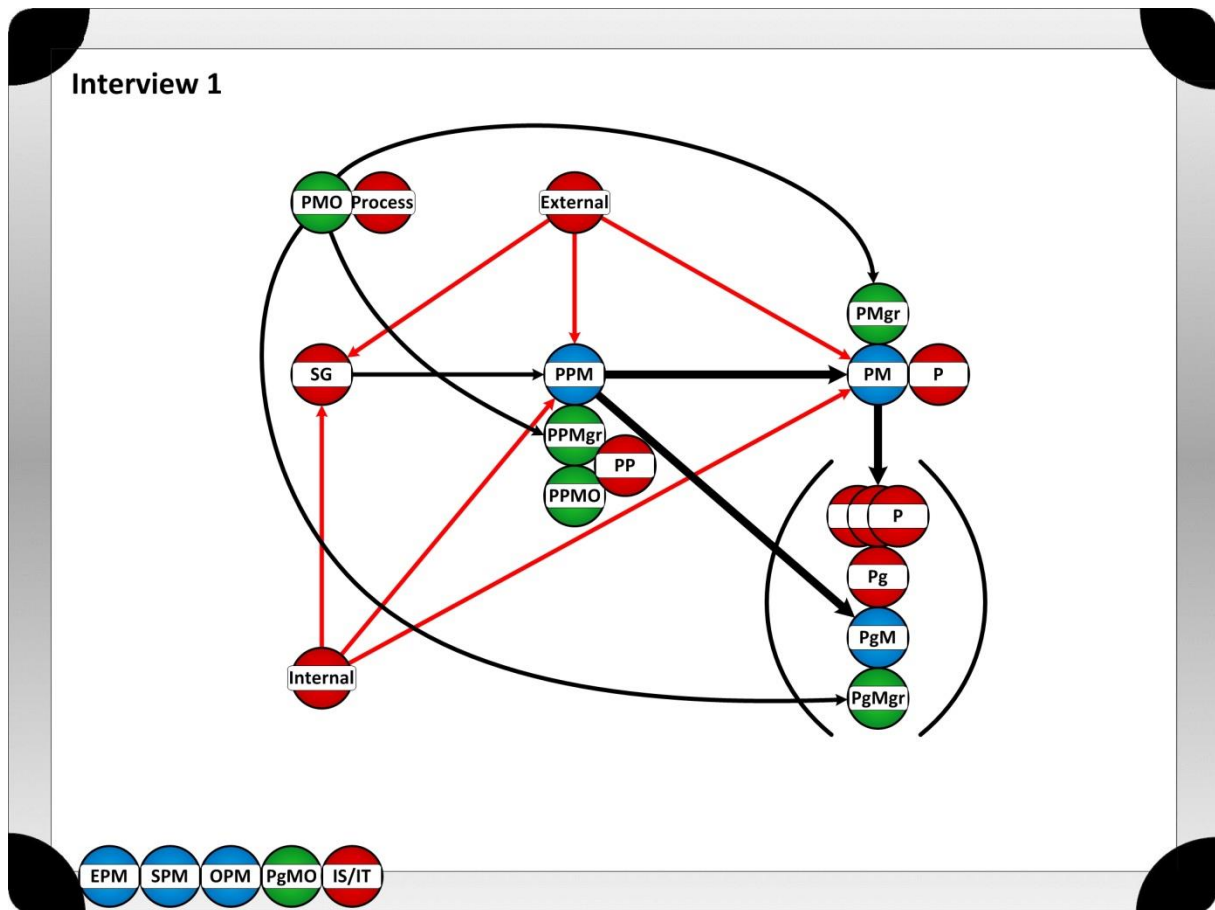


Figure 4.2 – Whiteboard displaying the relationship model resulting from interview 1.

Worth noting on the *formal relationships* is that PgM does not exist in all organizations, partly because it being expensive and that it's not always easy to coordinate such large efforts or simply because the organization is too small and does not need them.

There are basically four formal clusters within the model. The PPM cluster including the PP itself and related management functions such as the *project portfolio manager* (PPMgr) and the sometimes existing *project portfolio management office* (PPMO). The PPMgr is responsible for creating value standards, for example so PMgrs work together towards the strategic goals instead of competing with each other for resources. The next cluster is the PM cluster with related projects and direct links to the PPM and potential PgM cluster taking its directions from the first and managing the projects related to the second. It does not usually have an office which can be said to be linked closely in one cluster the same way as at the PPM level. This is because there is generally only one PP while there can be many projects thus the need for the *project management office* (PMO) to be more independent and keep track of commonly shared methods and processes relating to all management roles as illustrated in the model, for example the value standards shared by PPM, PgM and PM might fall to the task of the PMO to implement, making this the fourth cluster in the model.

To conclude, the interviewee lifts forward the *PMO* as a central piece in the relationships of PM, PgM and PPM as it handles methodologies used in all of the instances as well as handles shared processes such as value standards, profit calculations and project models which need to be coherent, understood and agreed upon for all managers in all three central concepts.

4.2.2 Interview 2

On the **first question**, only EPM was familiar due to the word *enterprise* frequently used as a way to describe a holistic approach to organizations. PM was familiar as the basic "how to" of running projects. The interviewee distinguished between *business projects* and *IT projects* with IT being more about delivering solutions and business being involved with complex change processes involving multiple stakeholders. Many projects frequently contain both these aspects. PgM was recognized by the interviewee as a hot topic. More on this under question three. PPM was described as linked to budgets but there can be several different portfolios within a company as further explored in question 3.

In the **second question**, the interviewee recognized the concepts, particularly PgMO as this was something he was working to set up at the moment. This PgMO was created in order to maintain a huge program which would involve a large number of projects focused towards a

complete restructuring of every management system in the company from implementing and developing the new solutions to phasing out the old systems. The PgMO was specific for each program but was generally called the PMO and could encompass both project and program offices. The PPMOs function was to make sure long term strategies are maintained, possibly over as long as a ten year period. All three offices were used in the interviewees' experience.

The **third question** started with the interviewee removing the EPM, OPM and SPM concepts and then placing the SG in the top centre of the whiteboard (see *Figure 4.3*) quickly identifying its relation to the PPM cluster. Next, the process symbol was used to represent the central significance of *business process re-engineering* (BPR) as the organizations primary focus. This focus not only concern PM processes but all processes in every aspect of the organization. Naturally then, the process focus affected strategic as well as tactical levels where we find the next cluster centered around PgM and containing the PMO, both these having to do with managing multiple projects also focused on process optimization. The PgMO was removed since PMO represents both offices. Also the P, Pg and PP basic concepts were removed and instead represented by the management concepts. IT/IS was not discussed.

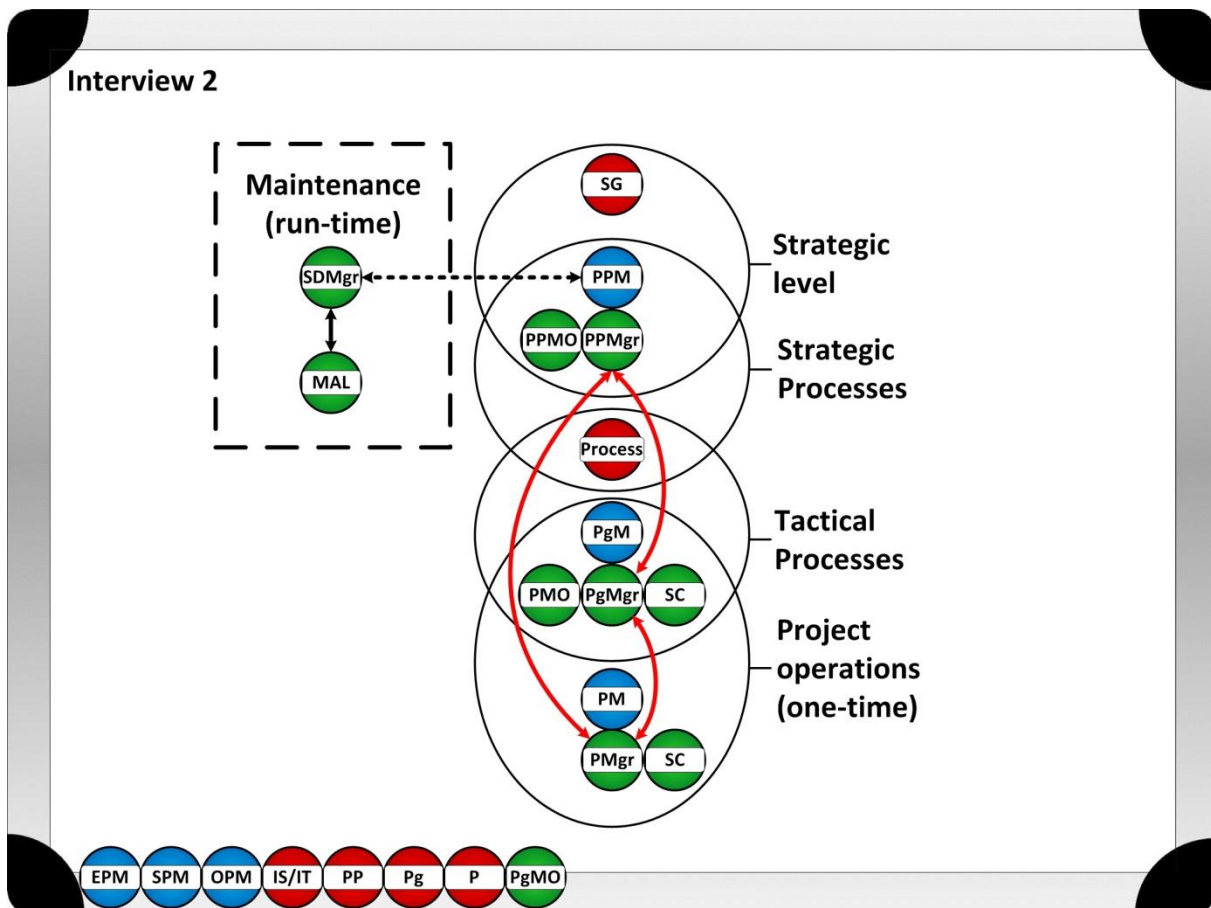


Figure 4.3 – Whiteboard displaying the relationship model resulting from interview 2.

The role of the *steering committee* (SC) was added since it is an important forum for both projects and programs. The *program manager* (PgMgr) and the PMgr needs to make sure the SC is full of useful people, executives and experts that can support the project/program. These positions are generally filled in collaboration with the chairman of the SC who acts as project/program owner. Two more concepts were added to explain the maintenance side of these projects, the *maintenance assignment leader* (MAL) responsible for maintaining separate delivered technologies for IT projects and the *solution development manager* (SDM) responsible for the whole delivery portfolio, being a different kind of portfolio than the general project portfolio. These concepts were not related to the core research of this thesis and as such are not further explored but included as qualitative insights none the less. The formal relationships are otherwise represented by the clustering and the black lined ellipses connecting clusters to each other and to the process centricity which runs through the organizations project efforts. The “one-time” concept in the model is used to describe time constraint for projects and programs while the “run-time” is used to describe ongoing maintenance after project completion with regards to IT solutions that needs serving, upgrading and so on.

The **fourth question** gave a couple of informal relationships mainly based around the fact that managers on different levels have friends and old colleagues that they might go directly to instead of going through the formal PMO or PPMO to encourage they get favorable advantages when it's time to decide the course of certain projects and programs or just to discuss and collaborate.

Concluding the interview, what seemed to be the essence of strategic PM, PgM and PPM relationships in this case was the *process centricity* connecting to all offices and thus to all of the three management concepts enforcing them to share internal processes for management as well as to work together towards overall enterprise process improvement. Another central issue worth noting was the *program emphasis*, representing the huge undertakings of BPR as well as bringing projects together to collaborate on meeting the same strategic goals instead of competing with other projects over shared resources. Organizing more and more projects as programs seemed the trend as after a few successful ones, the organization saw that the benefits far outweigh the costs.

4.2.3 Interview 3

For the **first question**, EPM, SPM and OPM concepts were not recognized or commonly used. PM, PgM and PPM was well recognized, one issue immediately spotted by the interviewee was problems with where to draw the line and how to structure these concepts. For example, a large project and a program can be very similar in nature and sometimes programs can become projects and projects can become programs. PPM was described as related to either a systems portfolio or a portfolio of projects administering key resources and balancing projects. Depending on the organizational size there can be several portfolios.

The **second question** concepts were all familiar; however the definitions and functions can vary greatly. Both PgMO and PMO deal with processes related to projects and program management as a primary task. In some cases, budget responsibilities, follow up and steering committees can also be functions of these offices. There can be several offices at many different levels, some linked directly to separate projects and programs or being more general in function, serving several or all projects and programs within an organization. The PPMO on the other hand is more strictly tactical in the interviewees' experience. At the same time, in smaller companies it can be merged with other offices for instance creating a single PMO handling projects, programs and portfolios.

At the beginning of the **third question**, the interviewee removed EPM, OPM and SPM concepts along with IS/IT and the basic P, Pg and PP concepts as well as the individual managers since these were represented in the management concepts. While starting to discuss the SG as a starting point for *Figure 4.4*, the interviewee recognized the importance and almost total focus on these for the organization she was currently involved with and that projects were ways of implementing these. While PPM was charged with the rough planning and approving of initiatives to fulfill the SGs, the PM and PgM were described as initiatives who are going to deliver the results, normally charged with achieving only parts of a strategic goal for each project since SGs are usually very extensive.

Another main relationship between the PM, PgM and PPM was quickly identified as the currently popular process centricity of organizations, seeing that the strategic goals usually involve a lot of BPR initiatives. Apart from the "mega business processes" and their current optimization focus, two new process related concepts were added, the *project management processes* (PMP) and *management model* (MM) more concerned with PM, PgM and PPM.

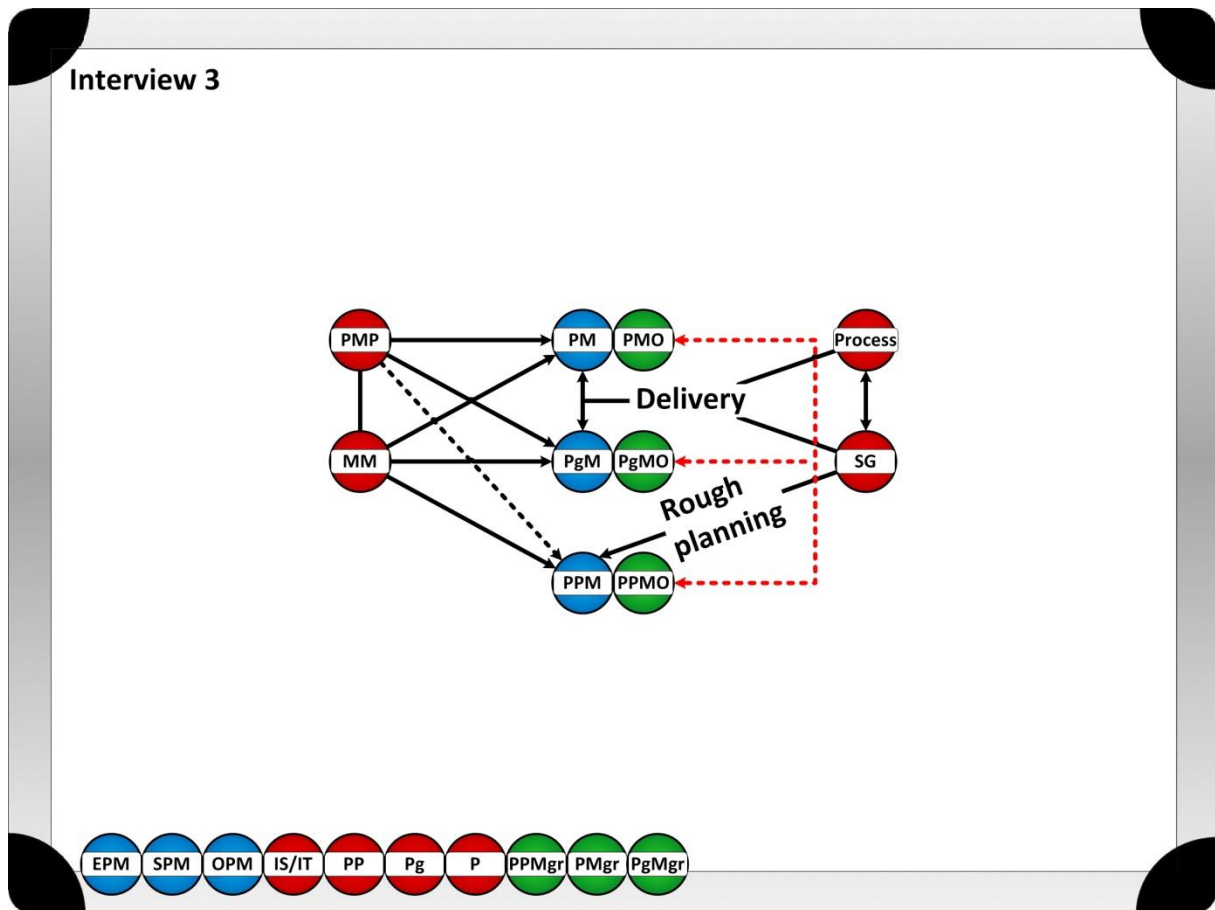


Figure 4.4 – Whiteboard displaying the relationship model resulting from interview 3.

PMP represents core processes in project and program management such as risk management, planning, cost calculations and such. It is used together with the MM relating to all management concepts as it provides a common language to communicate with thus enabling management at all levels to define and understand progress and thereby control projects and decide upon when a project is done, if it needs more resources, if it should be cancelled etc. PPM relates mostly to MM and not so much to PMP unless portfolio functions are included in these processes which in the interviewees' experience, were not the case. The three offices were coupled to their respective management function.

The **fourth question** did not identify many informal relationships. The interviewee felt that it varied from person to person and was not really related to any of the management concepts even though it was important for every project manager to establish good relations with as many people as possible. However, she thought it would be good to have a more “informal”, formal relationship between the PPMO and the PgMO and PMO as to ensure that the offices charged with delivery of strategic goals also understood the priorities on the strategic levels.

The interviewee concluded by pointing out that models such as this are always over simplified and cannot ever represent reality as each organizations context is different. For example, structures vary over time with offices transforming, being created or even removed as their functions thin out or as different initiatives are grouped together. *Organizational size* decides what offices and functions exist and in smaller organizations, structure is generally less complex while larger organizations call for more structure. What is consistence in any case is the link between *strategic goals* of “where to go”, the *processes* enabling smooth “ways to get there“, and the management of concepts like *projects* used to “make the journey”.

4.2.4 Interview 4

In the **first question**, EPM, SPM and OPM concepts were not recognized. PM, PgM and PPM was well recognized, PM characterized by *cost, scope & time* which is what projects are measured and controlled by. PgM is controlled by strategy and after defining this, projects within the program are initiated to fulfill these goals. PPM is concerned with follow up, review and monitoring projects within the portfolio or larger business unit but this is also the case with PgM which shares similar functions for controlling projects within programs. While projects and programs are more temporary in nature, the portfolio has a more permanent functionality.

The **second question** concerning offices was initiated by the interviewee reflecting on the general function of offices; namely summarizing and monitoring what transpires within the domain of the office as well as acting on those decisions, controlling supporting and general managing. Offices contain key roles necessary to maintain a holistic view of the responsibilities and to be able to handle any issues related to the office domain. The interviewee describes the offices as being called “project office” or “program office” although in short they are referred to as “PMOs”. There can be offices at individual level for each program or large project as well as in some cases central offices for all programs or all projects. The “portfolio office” is a more permanent function within an organization.

The **third question** started with the interviewee removing EPM, OPM and SPM concepts along with P, Pg and PP. The SG were recognized as ever present within the context and related to each of the PM, PgM and PPM concepts as shown in *Figure 4.5*. Both projects and programs are initiatives generally linked to the fulfillment of a SG, however they are temporary. PPM is also strongly linked to SG and like PgM, contains one or several projects and is normally permanent.

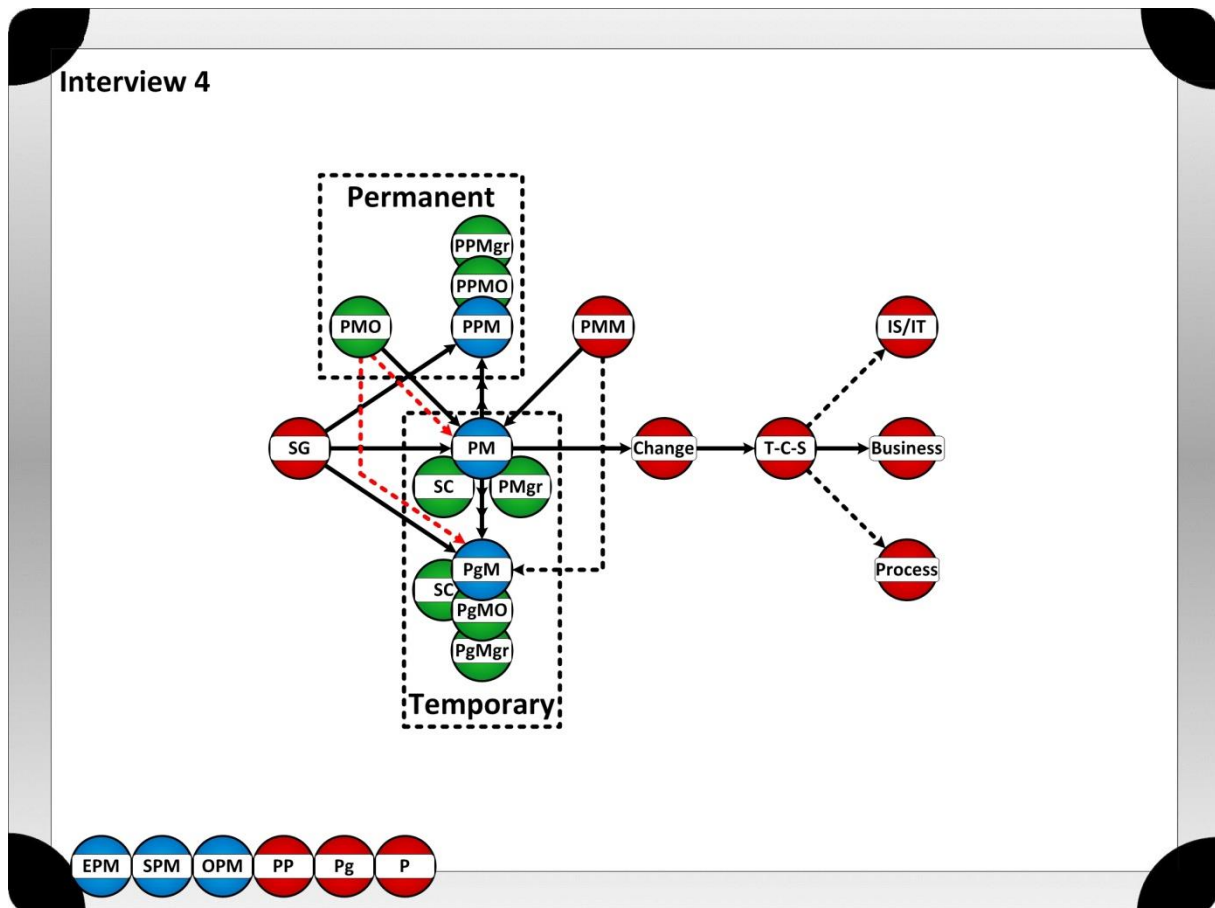


Figure 4.5 – Whiteboard displaying the relationship model resulting from interview 4.

The interviewee next described what a project involves in the form of it leading to some kind of *business change* (two new concepts added, *business* and *change*). This *change* always affects *business* and most of the times but not always it is linked to *process* improvement, represented by solid and dotted lines. Also, the characteristics of *Time, Cost, Scope* (T-C-S) is always present for projects and was included by the interviewee for clarity. If the project is an IS/IT-project, the *business* is still always affected and the same is true if the project focuses towards *process* improvements. The project is always the tool and programs and portfolios have their own methodologies but both concern the management of multiple projects. Another concept added by the interviewee was the *project management model* (PMM) which dictates how projects are run. PgM can also have such models but in the interviewees' experience, programs not always follows this model rigorously. Also added was the *steering committee* (SC) which exists for each individual project and program. Next the program and portfolio offices were coupled with each corresponding management concept except for the "project office" (PMO) which was added within the permanent context, responsible for standardizing the way all projects are reported and communicated as well as education on PM in general. Lastly the managers (Mgr) were added to each corresponding management concept.

The **fourth question** did not identify any informal relationships, probably due to lack of time as the interviewee had to leave. He briefly mentioned that the PMO might in some sense represent more informal relationships as in some cases it can intervene with programs and projects in need of support and structuring. If this is done, each situation calls for an individual approach to solve the problems at hand. However, this was also described as a formal function of sorts.

Concluding the interview, a focus can be seen towards PM and the individual *project* as the central concept bringing PM, PgM and PPM together. PM gets the job done but PgM and PPM is used to organize the efforts and coordinate several projects. *Hierarchies* are divided between the permanent and temporary functions with the portfolio on top followed by the program reporting directly to senior management and the projects reporting to programs and portfolio functions.

5. Analysis and Discussion

Bringing together the findings of the four literary sources reviewed as well as the results of the four interviews, an analysis and discussion can be initiated.

The literature and empirical data explored resulted in a number of findings, presented here as key concepts, relevant to understanding the strategic relationships between PM, PgM and PPM. All the findings have been summarized as bullet points to provide an overview for the resulting analysis and discussion, presented in *Table 5.1*.

Theoretical data sources	Empirical data sources
Reiling 2008	Interview 1
<ul style="list-style-type: none"> • Organizational size 	<ul style="list-style-type: none"> • Project Management Office (PMO)
<ul style="list-style-type: none"> • Operational breadth 	Interview 2
<ul style="list-style-type: none"> • Strategic context 	<ul style="list-style-type: none"> • Process centricity
Fitzgerald & Apfel 2009	<ul style="list-style-type: none"> • Program emphasis
<ul style="list-style-type: none"> • Roles 	Interview 3
<ul style="list-style-type: none"> • Offices 	<ul style="list-style-type: none"> • Organizational size
<ul style="list-style-type: none"> • Organizational size 	<ul style="list-style-type: none"> • Strategy – process – project
<ul style="list-style-type: none"> • Organizational methodology 	Interview 4
OGC 2008	<ul style="list-style-type: none"> • The project
<ul style="list-style-type: none"> • Organizational context 	<ul style="list-style-type: none"> • Temporal/permanent hierarchies
<ul style="list-style-type: none"> • Organizational culture 	
PMI 2008	
<ul style="list-style-type: none"> • Organizational Maturity 	

Table 5.1 – Displaying the key concepts found in the theoretical & empirical studies.

The *theoretical findings* all shared a strong *organizational focus* as the common denominator for the strategic relationships of PM, PgM and PPM, probably due to the purpose behind three of the sources to provide organizational models for practical use (PMI 2008, OGC 2008, Fitzgerald & Apfel 2009). However, the article by Reiling (2008) also shared this view and

while being independent from the central authorities of PMI, Gartner and OGC, still comes from a commercial and organizational context and is thus probably influenced by one or several of them in any case. Some of the findings were more detailed while others more generalizing which is probably a result of the method of source selection more elaborated on in the *Research Critique* subchapter.

Specific organizational factors identified were *methodology*, *roles*, *offices*, *operations*, *culture* and *size* while more general factors mentioned were *context* and *maturity*. When analyzing these it is possible to identify groups of factors related to each other. For instance, the commonly referred to *organizational size* could be said to include *operational breadth* as this refers to the number of different operations the organization is involved with. *Organizational methodology* represents the chosen structures and methods adopted by an organization and as such can be said to include *roles* and *offices* as these are generally derived from management methodology. *Organizational maturity* reflects both the *methodology* and the *size* together as closely linked factors as large organizations call for more structure. The *organizational culture* is an interesting factor as it is described as something to adapt to rather than something to change. Culture is not necessarily linked to organizational *size*, *maturity* or to the chosen *methodology* leaving it as an independent and equal factor in regards to these two. The *strategic context* would also stand for itself as regardless of *size*, *culture*, *maturity* or *methodology* there can be unique strategic situations and relationships with external sources that needs considering. All of these are of course linked in many ways, all being a part of the same grand *organizational context*. To help



illustrate the results of this analysis on *organizational context* Figure 5.1 is provided. In the figure it is clearly visible that the factor of *organizational maturity* is the one most explored and elaborated on containing four factors mentioned within.

The findings from the theoretical study all recognize the uniqueness of each *organizational context* and while all present slightly different views and models, none of the findings can be said to contradict the others. Finding different models in all sources along with each source agreeing on the existence of variation between each organization, it is safe to say that the premise of the study; the *confusion on the subject*, can be confirmed.

The *empirical findings* presented a more detailed result as to what the strategic relationships of PM, PgM and PPM looks like. While it's safe to say that the four interviewees would also agree with the theoretical findings of the *organizational context* being what determines the strategic relations of the three management concepts, the more detailed findings from the empirical study provides interesting qualitative insights to analyze within this context.

Interviewee 1 put emphasis on the *PMO* as the central concept linking PM, PgM and PPM together through being in charge of methodologies, processes, standards and communications shared by all of the three management concepts. The perceived situational existence of programs coupled with the functions described for the PMO, mostly found in smaller or medium sized organizations (PMI 2008, OGC 2008, Fitzgerald & Apfel 2009), reflects the personal experience of the interviewee from these kinds of organizations confirming the *organizational context* as determining PM, PgM and PPM relations.

Interview 2 concerned *process centrality* to a great extent as well as *programs*. The organization described by the interviewee had adopted the presently common theme (Papazoglou & Ribbers 2006, Ljungberg & Larsson 2012, Jacobsen & Thorsvik 2008) of a strong focus towards *process centrality*, viewing all operations as processes, both regular every day business and more temporary ones, for example the process of running a project or program aimed at improving a business process. Strategic goals within such an organization naturally focused on process improvement and so the *process* as an encompassing concept best described what united PM, PgM and PPM seeing as their *initial purpose*, the *concepts themselves* and their *end focus* all concern or contain *processes*. *Programs* were promoted for handling the business process remodeling (BPR) requested by the strategic goals reflecting that such encompassing undertakings across larger organizations require *programs* to deal with them efficiently, as opposed to the findings of *interview 1* which did not identify programs as very pervasive but none the less hailed from another organizational context. The *process* focus represents the *organizational methodology* chosen and the *program* focus represents the need for structure within a larger and more *complex organizational context*.

Interviewee 3 commented that *organizational size* always affects the way these relationships are structured. One thing found to be true in any organizational case was the relationship between *strategy*, *process* and *project*. First, *strategy* is formulated as a general plan to get something done, the *processes* show the actual steps that need doing and the *project* represents the effort of doing those steps. These three concepts are recognized as aspects of *organizational methodology* by both PMI (2008) and OGC (2008) amongst many others. This finding also relates back to the process centric *organizational methodology* in *Interview 2*. *Organizational size* was also defined in the interview as a factor and even though the interviewee said that the *strategy-process-project* factor was universally applicable the strategic goals are always unique for each business containing differently structured processes and as such the resulting scope, time and cost of the project will always be different, making both identified factors relevant and true.

Interview 4 presented the *project* as the central concept in PM, PgM and PPM relationships. This is clearly a valid point as both programs and portfolios contain them and would clearly not exist without them. This is seen in figures both from interviews and literature, *Figure 4.5*, *Figure 4.2* and *Figure 3.6* for example. *Hierarchies* were also emphasized as projects and programs are *temporary* in nature until their objectives are fulfilled but portfolios are *permanent* as they are concerned with managing the constant stream of projects and programs being initiated, processed and completed. *Hierarchies* exist as a result of *organizational methodology* charged with the structuring of complex *functions*, *roles* and *offices*.

Having analyzed and discussed the findings it is clear to see from both empirical and theoretical studies the great diversity of the subject matching the great diversity of organizations where PM, PgM and PPM are applied. Finding anything but diversity is probably impossible, especially if conducting a similar study with expanded data sources. The method applied in this case used similar text book definitions for the theoretical framework, similar 'best practice' sources for the literature review and similar interviewees for empirical data gathering and essentially all agree upon the diversity, confusion and situational context of the PM, PgM and PPM strategic relationships (Papazoglou & Ribbers 2006, Artto et al. 2009, Görög 2011, Ritson et al. 2011, Morris & Jamiesson 2005, PMI 2008, OGC 2008, Fitzgerald & Apfel 2009, Reiling 2008).

6. Conclusion

*This section concludes the findings of the empirical and theoretical studies giving a **concrete answer** to the research question and identifying **further research** topics as well as elaborating on **research critique** for the report and ending with a few **personal reflections**.*

What is the strategic relationship of project, program and project portfolio management?

Provided is a *concise written definition* structured as a reply-answer to the question above, produced from the combined findings elaborated on in the previous chapter.

The strategic relationship of project, program and project portfolio management is:

Uniquely defined by the organizational context in which the concepts are applied.

Relevant sub-factors of the organizational context include:

Organizational Maturity – Strategic Context – Organizational Culture

These three factors are further elaborated on in the previous chapter. It was decided not to include additional sub-factors in the concluding answer as these details needs to be further explored and confirmed in order to truly understand the *organizational context* as a concept. A satisfactory answer is presented in the definition above given the time and scope of the study and unanimously reflecting all data sources analyzed.

An initial idea was to create a *model* based on all the findings to conclude the report and provide an overview and greater understanding of the strategic relationship. However, this was discarded as in order to be consistent with the findings of the study, it would have had to be as complex as the multitude of *organizational contexts* analyzed. While it was a noble purpose to work towards, the concluded findings prevent such a model from being any different than the ones presented in the reference literature or created during the interviews.

6.1 Further Studies

This study focused on exploring the *strategic relationship of PM, PgM and PPM* by analyzing literature and conducting semi-structured interviews with a purpose of providing more clarity and some kind of qualitative truth derived from the combined findings of these sources which in a way succeeded. If instead seeking to produce a quantitative model or truth based around the same topic, an appropriate structure could begin with the creation of pre-determined categories of defined *organizational contexts*. That way, a generalized model to represent each of these categories could be created but would require a great amount of work to truly be said to generally represent each category of organizational context defined.

Otherwise, there are a number of related topics suitable for further studies. Most notably, the *organizational context* would do well to be further explored as a concept in its own right seeing as hints of this can be found throughout the background and theoretical framework as well as confirmed in the findings. Exploring what *organizational context* means would perhaps have added more value to the research field as the conclusions of this study was already widely known in a way. Sometimes it's hard to see the forest for all the trees and getting lost in the woods for a while is what's needed to find the right path and gain the required knowledge to move on.

Also, the subject of *organizational culture* is interesting and how large projects of business change relate to these. Whether such projects would seek to mold culture into a desired format or adapt the project to fit the existing culture? Further questions on this would be what the nature of culture really is? Compared to an organizational structure of abstract concepts, what is the cultural structure and why are there tendencies to tread lightly around it?

6.2 Research Critique

There are a number of potential sources of error which should be brought up as they regard the reliability and general application of the research findings from the literature and empirical studies. As stated in the *Research Methodology* chapter, the aim of the study was finding qualitative insights and not collecting large amounts of data for providing an accurate description of the world. However, this is a bit ambiguous as the purpose of the study means to find qualitative insights and bring them together in a generalization for promoting understanding which is really a more quantitative effort or at least application of the findings. This unwitting and double faced approach none the less proved itself capable of answering the research question as quantitatively speaking, the "qualitative" findings all basically confirmed the same thing; the importance of the *organizational context*, which rendered the creation of a generalized description impossible, if only to be hypocritical to the rest of the findings.

The research question itself was clearly limited in scale since it focused inwards towards the internal relations of the PM, PgM and PPM concepts instead of exploring external relations towards strategic management or daily operations within the organization. Further elaborating on the upper strategic levels and the operational connection to the business would doubtless have presented a greater understanding of the SPM concepts and the *organizational context* itself. As this was not the case, only general indications towards the further importance of what the entire organization looks like was found. Also, the focus towards the "strategic

relationship” and the use of the term “SPM” was limiting and predestining but perhaps necessary to keep the three main concepts together and stay on track throughout the study.

The theoretical study could have been more diverse in the selection of sources with the framework mostly based around common textbook definitions thus leaving out any controversial and also innovative takes on the subjects presented. This meant settling for the general text-book clamor of “strategic PM is a confusing subject” instead of having found beforehand that the confusion is due to *organizational context* and thus having the opportunity of finding a more theoretically new approach for the thesis. Also, the sources explored in the literature review were mostly surface scratched and so, the findings from the huge works presented by Gartner, PMI and OGC can’t really be said to represent these sources in truth but rather the authors’ view of them, given the specific research subject.

The interviewees were for the largest part from similar organizational contexts which limits the findings to represent the same type of relationship models those persons derive their experience from. Also, the interviewees were mostly from the same employee position within the PM, PgM and PPM hierarchy. Involving more interviewees from the underrepresented management levels and comparing these would generate an interesting context to analyze the results from.

Despite these potential sources of error, the insights generated by this study should not be discarded and could prove useful for organizations about to adopt a new model for strategic project management. According to the conclusions of this study, such an organization would be wise to consider their *organizational context* and all it stands for prior to making any investments or major decisions on implementing methodologies.

6.3 Personal Reflections

To round off on a more personal note, seeing as there will probably still exist a great deal of confusion on the subject out there, having experienced the process of conducting this study becomes more and more significant. As without it, I would have still been confused about the fact that every organization is doing things differently when it comes to project, program and project portfolio management, now I begin to understand **why** they do things differently.

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Appendix 1

Concent of Recording (Swedish)

Tack för att du deltar i min intervjustudie.

Jag kommer att spela in ljud från den här sessionen för att kunna gå tillbaka och studera det vi talat om vid ett senare tillfälle. Du och det företag du arbetar på kommer att behandlas anonymt.

Samtycker du till denna inspelning?

Appendix 2

Interview questions (Swedish)

Jag har samlat in vanligt förekommande begrepp för att kartlägga relationerna mellan koncepten PM, PgM och PPM ur en strategisk synvinkel. Vissa av dem är självklara men vissa andra är inte lika frekvent förekommande i den litteratur jag studerat. Därför vill jag ha din hjälp att resonera kring vilka av begreppen som är centrala för att förstå relationerna. Du är tillfrågad som fristående sakkunnig och inte som representant för ditt företag.

Första frågan: De tre begreppen EPM, SPM & OPM är alla relaterade till PM, PgM & PPM. Jag skulle vilja att du beskrev din uppfattning om dessa begrepp.

Andra frågan: De tre begreppen PMO, PgMO & PPMO beskriver ”kontor” med administrativa uppgifter. Jag skulle vilja att du beskrev din uppfattning om dessa begrepp.

Tredje frågan: Jag skulle nu vilja ha din hjälp att skapa en modell över de strategiska *formella* relationerna mellan PM, PgM & PPM. Denna relation kommer att innehålla strategiska mål som startpunkt för relationerna. Resten är helt upp till dig och du får plocka bort befintliga begrepp under modelleringens gång som du tycker är onödiga eller lägga till sådana som du tycker saknas. Du får gärna resonera högt och beskriva vad du gör under modelleringen.

Fjärde frågan: Hur kan eventuella informella relationer se ut i modellen du beskrivit? Rita gärna dessa med den röda pennan och beskriv dem.

Tack för din medverkan!