Critical Success Factors in Project Management: An ethical perspective

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A 60 credit units Master´s thesis

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ABSTRACT

Since 1950s a great deal of work on project success has been contributed to the project management theory. Ideas and methods have developed from having a narrow focus on simple measurements of time and cost to multidimensional frameworks, focusing not only on the impact on the present but also on the future. Project success factors have been analyzed and project success criteria defined and around 80 articles and books published on the subject. When the literature on project success is reviewed in the context of ethics and a search made to find discussion about the impact of ethics on project success, the results are very limited.

The first goal of the research was to evaluate the status of project success measurements among project managers. The second goal was to see if project managers consider ethical factors as critical success factors in their projects and, most importantly, find out if and how they do evaluate those factors as such.

The research approach was a qualitative one that employed a web-based survey. The scope of the research covered all IPMA certified project managers in Iceland which are around 220. The IPMA certification is a competence based standard that provides a benchmark for recruitment, training and development of project management staff. The survey consisted of standard background questions for processing purposes, statements on success in projects and statements on ethics in projects.

The findings showed amongst other things that around 71-79% of project managers normally define success criteria for cost, time and quality aspects of projects but only 55% define success criteria for customer satisfaction. It also showed that around 42-47% of projects finish within time limits, on budget and within other project limits, such as quality. Regardless of this, the projects are in most cases successful and make a positive impression on the customer, project team and organization. In respect to ethics, less than half of the project managers say they have the proper tools and just about one third actually conducts ethical risk assessment in their projects

Finally the thesis presents a framework, the Ethical Question List, which can be used as a tool to evaluate the ethical aspects of a project and highlight weaknesses within it that the project manager must then consider and manage. The value and possible impact of the framework is the moral thinking it demands from the project managers, and asks of them to view ethical aspects of their projects as success factors. The framework is meant to act as a catalyst for the ethical awareness and encourage project managers to good deeds.

ÚTDRÁTTUR

Síðan 1950 hefur mikil vinna verið lögð í rannsóknir á árangri verkefna og hefur orðið til mikil þekking sem í dag er hægt að finna í fræðum verkefnastjórnunar. Hugmyndir og aðferðir hafa verið þróaðar og hafa farið frá því að hafa þrönga og einfalda sýn á árangursmælingar, með tíma, kostnað og gæði sem aðalmarkmið, til þess að verða fjölvíddar líkön og aðferðir sem horfa ekki aðeins á áhrif verkefnis á nútíðina heldur einnig á framtíð. Árangursþættir hafa verið rannsakaðir, árangursmarkmið skilgreind og um 80 greinar og bækur skrifaðar um efnið. Þegar staða þekkingar á árangri í verkefnum er skoðuð í samhengi við siðferði í verkefnum þá kemur í ljós að vinkill á árangri verkefna hefur ekki verið mikið skoðaður.

Fyrra markmið rannsóknarinnar var að meta stöðu árangursmælinga í verkefnastjórnun meðal verkefnastjóra. Seinna markmið verkefnisins er að skoða hvort verkefnastjórar meta siðferðilega þætti í verkefnum sínum sem árangursþætti.

Í rannsókninni var beitt megindlegri rannsóknaraðferð sem gekk út á vefkönnun sem send var út. Þýði svarenda var skilgreint sem allir verkefnastjórar á Íslandi sem tekið hafa IPMA gráðu hjá Verkefnastjórnunarfélagi Íslands en þetta eru um 220 verkefnastjórar. IPMA gráðan er alþjóðlegur staðall sem byggir á hæfni verkefnastjóra. Notkun staðalsins gerir nýliðun og þróun verkefnastjóra markvissari hjá fyrirtækjum. Könnunin samanstóð af bakgrunnsspurningum sem notaðar voru í úrvinnslu, fullyrðingum varðandi árangur í verkefnum og síðan fullyrðingum varðandi siðferðilega þætti verkefna.

Niðurstaða rannsóknarinnar er sú að verkefnastjórar nota almennt hina klassísku árangursmælikvarða fyrir verkefnisárangur sem eru tími, kostnaður og gæði, en minna en helmingur þeirra nær að standast þá. Þrátt fyrir þetta telja þeir verkefnin skila árangri.

Niðurstöður rannsóknarinnar sýna meðal annars að um 71-79% verkefnastjóra skilgreina venjulega árangursmælikvarða fyrir tíma, kostnað og gæði í sínum verkefnum en aðeins um 55% skilgreina árangursmælikvarða fyrir ánægju viðskiptavinar. Einnig mátti lesa úr niðurstöðunum að um 42-47% verkefna klárast að meðal tali innan tímamarka, kostnaðaráætlunar og annarra verkefnismarkmiða. Þrátt fyrir þetta þá heppnast verkefnin í flestum tilfellum vel og hafa jákvæð áhrif á viðskiptavininn, verkefnisteymið og skipulagsheildina. Hvað siðferði varðar þá telja minna en helmingur verkefnisstjóra að þeir hafi þau verkfæri sem þeir þurfa til að meta siðferði verkefna og aðeins þriðjungur framkvæmir siðferðilega áhættugreiningu í sínum verkefnum.

Ritgerðin kynnir að lokum aðferðafræði sem verkefnastjórar geta notað sem verkfæri til að meta siðferðilega þætti verkefna þeirra. Aðferðarfræðin dregur fram mögulega veikleika í verkefninu sem verkefnastjórar verða síðan að velta fyrir sér og taka á. Gildi aðferðarfræði sem þessarar er sú að verkefnisstjórar horfi ekki fram hjá siðræðnum gildum í sínum verkefnum heldur horfi á þau sem hluta af árangursþáttum verkefna. Aðferðarfræðin á að virka sem hvati á siðferðisvitundina og hvetja verkefnisstjóra til góðra verka.

PREFACE

This report presents a master's thesis that finalizes my studies at University of Iceland for a Masters of Industrial Engineering specializing in project management. The thesis was planned and performed mostly at the University of Iceland but also at TM Software inc. during the period of June 2006 through May 2009.

"*Managing a project is like flying an airplane with one small difference – When flying an airplane, crashing and burning is "really" not an option…*"

Sigurður Fjalar Sigurðarson

Reykjavík, May 2008

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1 INTRODUCTION

1.1 Motivation and background

Much has been researched in the field of project management. The outcome of this has provided a lot of good ideas and methods, both theoretical and practical. Frameworks for measuring project success have been introduced, the idea of a balanced scorecard, critical success factors and so forth. Not as much has been researched and consequently written about ethics in context with projects and project success.

When it comes to the understanding of critical success factors in project management literature it seems that not much attention is given to the potential ethical issues in projects. Discussion on the "*ethical Project Manager*" and how "*An ethical Project Manager is a successful Project Manager*" can be found, however, ethical factors as indications of success in projects do not yet seem to have a strong presence in the project management literature.

Ethical questions or issues, can however, be raised regarding the composition of the project team or methods used in the projects execution. Examples of this could be, testing of drugs in the pharmaceutical industry. The project itself may also be ethically challenging and unacceptable, for example, to the society. Forgetting to consider ethical factors as an essential part of the project success can, in fact, make or break the project success. Taking into the account the influence of ethics on project success while preparing a project, might, therefore, be a time well spent.

Projects can simply fail, although all planning and execution is near perfect, simply because they are ethically challenged and time was not reserved to evaluate ethical aspects. Project can be technically perfect, it's planning and execution are excellent but it may fail because it goes against virtue, does not facilitate well-being of many, goes against what we would like to see as the categorical imperative project manager or work against the rights of people involved in the project and the society.

1.2 Approach

This research starts out by surveying project manager's success in managing projects using traditional project management success criteria. Also if and how project managers manage ethical aspects of their projects and if they think they have the proper tools to do that.

Based on results from the survey and research of the project management literature a framework for evaluating ethical aspects of projects has been developed and is presented in this paper.

1.3 The research questions, goals and deliverables of the project

This project has two main goals:

The first goal is to evaluate the status of project success measurements among project managers. A special focus is put on the group of project managers that have finished an IPMA certification.

The IPMA certification is a competence based standard that provides a benchmark for recruitment, training and development of project management staff. IPMA stands for the International Project Management Association and is a non-profit project management organization, founded in 1965, that seeks to actively promote project management to businesses and organizations around the world. Project managers with an IPMA certification have a basic knowledge of the project management concepts and are able to answer questions based on those concepts.

The second goal of the project is to see if project managers consider ethical factors as critical success factors in their projects and, most importantly, find out if and how they do evaluate those factors as such. The ethical factors are viewed from the perspective of the project, its preparation, execution and its product and not just with focus on the project manager and his ethical aspects.

The research questions are

1. Do project managers generally measure the success of their projects in terms of time, cost, quality, and customer satisfaction?
2. How well are project managers managing their projects?
3. Do project managers consider ethical factors in their projects and do they conduct ethical risk assessment?
4. Is there a way to describe a simple framework that guides project managers in evaluating ethical aspects of their projects and account for possible ethical risk?

1.4 Thesis overview

Chapter 1 is an introduction.

Chapter 2 reviews the literature in the field of project success and ethics in projects. Much research has been conducted in the field and many aspects must thus be taken into consideration.

Chapter 3 describes the research method applied.

Chapter 4 presents the results of the research.

Chapter 5 discusses the data collected and answers the research questions.

Chapter 6 gives a summary and conclusion. The possible meaning of the results for the field of project management is discussed and possibilities for further researches and works are pointed out.

This paper concludes with appendices containing raw data from the quantitative research and transcripts from interviews conducted in the qualitative researches. Appended in the back of the theses is a CD with all the data from the project.

2 LITERATURE REVIEW

2.1 General development and retrospective look on project success

"Trying to pin down what success means in the project context is akin to gaining consensus from a group of people on the definition of "good art""

- Jugdev & Müller (2005)

2.1.1 Project management and project success (1950s-1980s)

Project management is said to have emerged in the 1950's with the development of techniques like Program Evaluation and Review Technique (PERT) and Critical Path Method (CPM). The reason for this was the need of Western industrial and military establishments to plan, schedule and control complex projects. According to Morris (1987) the origin of modern project management stems from the chemical industry just prior to World War II.

From that point on, the focus on planning and scheduling, managing budget and evaluating quality has been the main focus of project management practice, research and development. Part of this development is the notion of project success, success criteria and success factors.

During the time between the 1950s – 1980s projects were mainly considered in the context of industry and production of goods. Customer contact was minimal during the project execution and long-term follow-up and troubleshooting was not common. At this time the concept of client satisfaction remained unclear.

In the 60s and 70s the outlook regarding the components of project success began to expand beyond the time, cost and quality attributes. Then in the 1980s until late 1990s, further studies begun to research deeper in defining project success, where it was concluded that a part from the Iron Triangle of time, cost, quality and project management techniques, other dimensions affect the success of failure of a project. Pinto et al. (1988a) advocate project success not only evolves from a technically correct project but also effectively interfacing with clients and stakeholders. De Wit (1998) concludes that the project success also includes the objectives of all stakeholders of the project.

In the past 40 years a slow but gradual understanding begin to emerge where project management success began to be assessed with input from stakeholders and that it should be assessed beyond the project phase.

The early literature as well as practice was predominated by the evaluation of three basic criteria of time, cost and quality. These criteria are easy to use and within the realm of the project organization. However, the criteria have been criticized for being inadequate for many reasons, e.g. (Shenhar Levy & Dvir, 1997; Shenhar Dvir Levy & Maltz, 2001; Atkinson, 1999; Baccarini, 1999; Pinto & Slevin, 1988).

In a paper by Atkinson (1999)**,** where a new framework for success criteria is proposed, he highlights two views common by various authors in defining project management. The first view is what he terms as "The Iron Triangle" of cost, time and quality. The other view defines project management based only on its process. Time and cost are best guesses, typically calculated when less is known during the planning phase, and quality is an attitude that changes over the project life cycle.

For over 50 years, project success has been defined by the criteria of time, budget and deliverables or quality. For those 50 years projects have continued to fail in their efforts to achieve this commonly known Iron Triangle (Henrie & Sousa-Poza, 2005). Bryde (2005) Adds that the parameters of project success were, in part, constrained by the practical difficulties of assessing success using other, more subjective, measures. Belassi & Tukel (1996) observe that since the 1950s it was assumed that the development of better scheduling techniques would result in better management and thus successful completion of projects. These authors agree that most of the early studies assumed that if project completion time exceeded its due date, or expenses overrun budget or outcome did not satisfy a predetermined performance criteria the project was assumed to be a failure.

2.1.2 The project success

"Success means (gaining) advantage, superiority, victory, accomplishment, achievement, added value."

– Shenhar et al., 2003

Numerous authors have researched the subject on project success but the concept of project success still remains ambiguously defined.

Project success is probably the most frequently discussed topic in the field of project management, yet it is the least agreed upon even though for more than two decades, researchers have labored to identify managerial variables critical to success (Shenhar et al., 2002 who cite Pinto & Slevin, 1988).

For example, a project that met budget and schedule constrains, may count as successful, but did not meet customer needs and requirements (Baker et al., 1988), or a project that resulted in a product or a deliverable that was difficult to market.

According to Baccarini (1999) the literatures on project management provide no consistent interpretation of the term "project success". He summarized literature from McCoy (1986) and Wells (1998). McCoy (1986) observes that a standardized definition of project success does not exist nor an accepted methodology of measuring it and Wells (1998) also observes that there is a lack of attention given to defining success except in quite general terms.

Success is measured in subjective and objective ways and it means different things to different people (Freeman & Beale, 1992). Considerable work has occurred on conceptualizing success in the project and project management (Jugdev & Müller, 2005). Success evolved from the project being merely technically correct in the view of the providing organization to how the project interfaced with the client organization and

flowed from internal and external factors (Pinto & Slevin, 1988b). While project managers work toward project objectives defined for their specific projects, line managers see projects as building blocks to achieve an overall business objective ("effect-goal") that arise from the productive use of the project outcome (Wenell, 2000). While it is desirable that project managers take responsibility for this wider objective, it is often not possible due to the temporary nature of the project team and the time gap between project delivery and accrual of business results (Wenell, 2000).

2.1.3 Distinction between project management success and project success

Apparently determining whether a project is a success or a failure is far more complex. There can be ambiguity in determining and measuring the success or failure of a project. Delays in completion of projects are common but they could still be considered successful.

De Wit (1988) was among the first to recognize that there is a difference between project success and project management success and that a distraction is needed between them. The importance of this is that successful project management will contribute to the achievement of a project but project management will not stop a project deliverable from failing to succeed. Baccarini (1999) also points out that project management literature often confusingly intertwine two separate dimensions of project success – Product success and project management success.

> ***Project management success*** focuses on fulfilling the cost, time and quality criteria.
> ***Project success*** deals with the effects of the project's final deliverable, namely project goals, project purpose and satisfaction of stakeholders.

The following examples clearly contrast the difference between *project management success* and *project success*.

> ***"Sydney Opera House** – With its graceful sails dominating Sydney Harbour, the Sydney Opera House is arguably one of the most recognized buildings in the world. Yet, from a project management perspective, it was a spectacular failure. When construction started in 1959, it was estimated to cost $7 million, and take four years to build. It was finally completed in 1973 for over $100 million."*
>
> *– Architecture Week, 2003*

On the other hand, a project that is perceived as successful by the project manager and team members might be perceived as a failure by the client or market.

***"Project Orion:** This massive effort to develop Kodak's new Advantix photographic system was reputedly very well managed from a project management perspective. PMI recognized it as the 1997 International Project of the Year and Business Week selected the system as one of the best new products of 1996 (Adams, 1998). But Kodak's stock price has fallen 67% since the introduction of the Advantix system, in part because it failed to anticipate the accelerating switch to digital photography."*

– Bandler, 2003

Project success can mean different things to different people because of varying perceptions and point of view. This can lead to a disagreement about the success of a project (Liu & Walker, 1998). The perception of the overall project is likely to be different between users and stakeholders and thus also is the project success.

Shenhar et al. (2002) suggest three reasons for this difference in perception. First of all this is due to the universalistic approach used in most project management studies that all projects are assumed to be similar, secondly the subjective nature of the success or weakly defined success measures and at last the limited number of managerial variables examined by previous research.

According to Munns & Bjeirmi (1996) this difference in perception will continue to exist if a distinction between project success and project management success is not established. Project management success is oriented towards planning and control in the context of the short-term life of the project development and delivery but project success tends to be long-term in nature and stretches with the objective or product, the project delivers. The project management success focuses on the values of the Iron Triangle and also on the way in which a project is managed, that is the "quality of the management process". This forms one part of project success defined to preparation and execution phases in the project life cycle. The other part of project success relates to the effects of the project's deliverable or service and is referred to as "product success" (Baccarini, 1999).

Therefore a project can be viewed as being successful despite the Iron Triangle criteria not being met. Munns & Bjerimi (1996) agree on this and illustrate this distinction in their paper as follows.

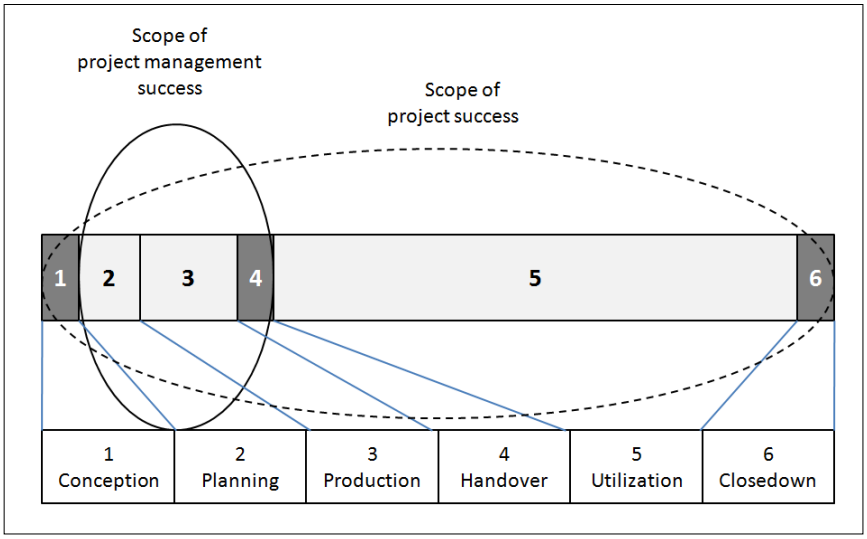

Figure 1: The scope of success within the project life cycle (Munns & Bjeirmi, 1996)

The project management team is focused on the task of successfully reaching the end of phase 4 seen in Figure 1, the Handover phase, at which point they will terminate their involvement whereas the client is interested in all the phases. The scope of the *project management success* spans phases 1-4 and the scope of the *project success* spans all the phases (Munns & Bjerimi 1996).

Distinction between project management success and project success is not just a debate about terminology. Determining how success is to be defined for a project is a necessary precursor to the establishment of appropriate methods for managing the project life cycle and for the selection of suitable measurement techniques, Bryde (2005).

Finally, defining success is also a key step in understanding the important "success factors", that is, the inputs to the project management system that have an influence on the outcome (Cooke-Davies, 2002). He also defines project management success and project success as follows

> ***Project management success***, being measured against the traditional gauges of performance (i.e., time, cost and quality/performance).
> ***Project success***, being measured against the overall objectives of the project.

According to PMBOK the project life cycle is made up of three main phases; *Initial/Implementation*, *Intermediate/Execution* and *Final/Handover*. The literature mainly focused on the implementation or execution phases where the attention was on the Iron Triangle (Lim & Mohamed, 1999). This was understandable as the implementation phase was typically the longest and consumed the most resources (PMI, 2000).

2.1.4 Project success criteria and project success factors

By the late 1990s and the turn of the century, researchers began to differentiate between the variables affecting project success.

For projects to be implemented successfully, the two components of project success must be clearly defined, agreed and progressively reviewed by all parties. These two components are the project success criteria relating to users and sponsors and the project

success factors that are required to deliver those success criteria (Wateridge 1995). On the same note Cooke-Davis (2002) emphasize the importance of distinguishing between the two components of project success namely the success criteria which he describes as the benchmark to measure or judge success or failure and success factors which are the management inputs and systems that would lead to project success.

Westerveld (2003) constructed a model that links success criteria and success factors together in one coherent model which he named the Project Excellence Model. The model is based on the EFQM business excellence model and is aimed to answer a growing need for a management model that helps project managers to deal with large and complex projects. The model is also based on the assumption that in order to manage a project successfully, the project organization has to focus on RESULT AREAS containing Project Success Criteria and ORGANISATIONAL AREAS containing Critical Success Factors. The following figure describes the context of the model.

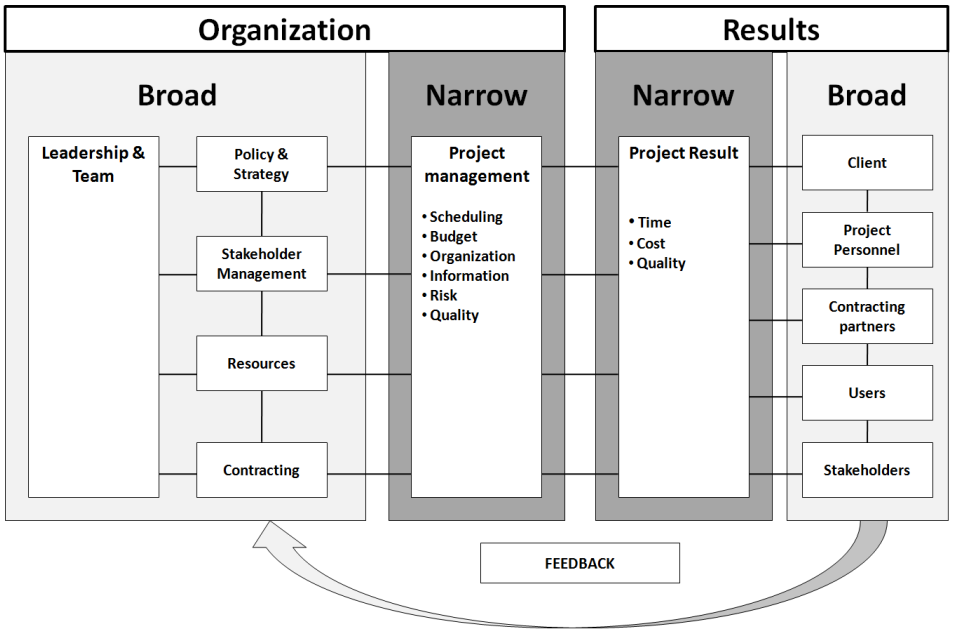

Figure 2: The Project Excellence Model (Westerveld, 2003)

According to Westerveld (2003) Project Excellence Model can be applied in various project stages and situations. It can be used for setting up managing and evaluating a project. The term "Key performance indicators" (APM, 2000) is often used interchangeably with the term "project success criteria"

2.1.5 Critical Success Factor lists (1980s-1990s)

Between the 1980s-1990s the emphasis in project management was on developing Critical Success Factor lists. The Critical Success Factor concept is generally abbreviated as CSFs and will here be used that way. Krezner (1987, pg. 32) defines the CSFs as the "elements required for creating an environment where projects are managed consistently with excellence". During this time period the literature started focusing more on the importance of the stakeholders' satisfaction as an indicator of success (Lim & Mohamed, 1999). It has been observed, that users are generally more demanding with the satisfaction criteria than the completion criteria (Munns & Bjeirmi, 1999). Satisfying end users needs is one facet of

quality assurance, and the quality is the satisfaction of users needs. Success for the user will be oriented towards long-term utilization of the project deliverable rather than project management techniques. During the project's execution the project team concerned with the development, may have little or no direct contract with the user. The user in the same way may remain unaware of the project management processes and their success (Munns & Bjeirmi, 1999).

Literature in the mid-1980s listed success factors using anecdotes and single case studies (Pinto & Prescott 1990). Project success contributed to excellence within time, cost and performance/quality levels (Kerzner, 1987). These metrics may be misleading if expectations are not met. Success was typically described with a single measure for the project instead of multiple measures over the life cycle meaning that the project was either a success or a failure (Jugdev & Müller 2005). Although a number of useful CSFs were identified and described in this time period, the publications group did not integrate the concepts in a coherent manner (Jugdev & Müller 2005).

An example of an interesting success factor is the project manager's leadership style but Turner & Muller (2005) conducted a literature review on this topic in research conducted for the Project Management Institute. According to them, the literature up to this point did not typically mention the project manager and his or her leadership style or competence as a success factor on projects. They conclude by saying that it is conceivable that the leadership style and competence of the project manager have no impact on project success. But a question like this can only be answered if it is directly measured.

2.1.6 Critical Success Factor Frameworks (1990s-2000s)

The product life cycle phases of utilization and close down did not emerge as components of the project management success literature until in the 1990's when more comprehensive CSF frameworks were developed.

According to Jugdev & Müller (2005) integrated frameworks emerge in the literature on project success in the 1990s. Most of the publications on the topic addressed the concept that success was stakeholder-dependent and that success involved the interactions between the internal and recipient organization (Kerzner, 1987; Lester, 1998). De Wit (1988) constructed a project success framework that takes into consideration the stakeholders, project objectives and project management. He propagates that there are two components to project success namely the criteria for success and the manner in which these objectives are met and concludes that "The degree to which these objectives have been met determines the success or failure of a project". Kerzner (1987) broadened the span of CSFs by stating that they applied to projects, project management, the project organization, senior management and the environment. Pinto developed a framework for success wherein the three concentric circles of technical validity, organizational validity and organizational effectiveness overlapped (Pinto & Slevin 1988b). Pinto also reported that CSFs were not of equal importance throughout the life cycle stages of conceptualization, planning execution and termination; however, the project mission was important at all four phases of the life cycle.

Some CSFs were common to projects regardless of projects type while other were specific to project groupings and the relative importance of CSFs varied over the course the project life cycle (Pinto & Covin 1989). Furthermore, project success was multidimensional and perceived project success consisted of three conceptually and statistically distinct factors, the implementation process, the perceived 'value' of the project and the client satisfaction, that were consistent with the quadruple constrain (Pinto & Prescott 1990).

Morris & Hough (1987) suggest that projects are influenced by seven forces that help determine project success**.**

- The external context of the project that encompasses project sponsorship**.**
- External influences such as political, social, technical, legal, environmental and economic.
- Attitudes that reflect the importance attached to the project and support given to it at all levels of management.
- Definition that indicates what the project will accomplish and the approach to design and technology to achieve this.
- People and their management, leadership and teamwork.
- System related to planning, reporting and control.
- Organization related to roles, responsibilities and contractual relationships.

Morris & Hough were pioneers in developing a comprehensive framework on the preconditions of project success. They analyzed project success in the context of major projects and the work was based on eight case studies. They developed a comprehensive framework depicting the elements of project success:

- Attitude
- Project definition
- External factors
- Finance
- Organization
- Contract strategy
- Schedule
- Communications
- Control
- Human qualities
- Resource management

Their book addressed the concepts that success is both subjective and objective, that success varies across the project and product life cycle and that various stakeholders are involved.

Freeman and Beale (1992) listed criteria for measuring success that are similar to Kerzner's. Both the Kerzner, Freeman and Beale contributions identified categories of success, but lacked the depth of integrated frameworks observed more recently in the literature.

Between 1987 and 1990 Pinto published a number of articles on CSFs and is widely known for the "10 CSF" list (Pinto & Covin 1989; Pinto & Mantel 1990; Pinto & Slevin 1987, 1988a, 1989):

- Project mission
- Top management support
- Project schedule/plan
- Client consultation
- Personnel
- Technology to support the project
- Client acceptance
- Monitoring and feedback
- Channels of communication
- Troubleshooting expertise

Belassi & Tukel (1996) presented a holistic CSF framework that included corporate and industry factors. They grouped and classified individual success factors and that classification enables the readers to clearly see what category certain CSFs belong to. The classification system allows for an examination of CSF interrelationships.

The four categories are:

- Factors related to the project
- Factors related to the project manager and team
- Factors related to the organization
- Factors related to the external environment

The scheme is systematic and helps the reader to clearly see the relationships and implications, when these factors are not addressed. The study also shows that CSFs vary with industry and that top management support is vital.

Turner (1999) built a framework of his own, based on the framework by Morris & Hough (1987). He discusses how successful projects are judged using multiple subjective and objective criteria. In many respects the framework by Morris & Hough is similar to the one by Belassi and Tukel (1996). When the frameworks are compared, the difference is not that much.

In a framework named SMART® for project management, success was rooted in projects that were strategically managed, aligned, regenerative and involve transitional management (Hartmann, 2000). The list of CSFs was similar to Pinto's & Slevin's (1987) but wider in scope, as it gave better attention to environmental factors (e.g. social, political, corporate and natural). Success was defined as "one were the stakeholders are satisfied with the outcome" (Hartmann, 2000, p.369)

Cleland & Ireland (2002) suggested that success be viewed from two vantage points; the degree to which technical project performance objectives were attained (e.g. time, cost and scope) and the contribution that the project made to the strategic mission of the firm.

Other authors have taken this one step further and included the customer organization as an additional concept (Belassi & Tukel 1996; Kerzner 1987; Morris & Hough 1987; Turner 1999).

A paper by Fortune & White (2006) shows how a systems model, the Formal Systems Model, can be used as a framing device to deliver the benefits of taking account of "critical success factors" while at the same time avoiding the problems associated with "critical success factors" that give rise to the criticisms. The first is that the inter-relationships between factors are at least as important as the individual factors but the CSF approach does not provide a mechanism for taking account of these inter-relationships. The second is that „the factor approach tends to view implementation as a static process instead of a dynamic phenomenon, and ignores the potential for a factor to have varying levels of importance at different stages of the implementation process."

In an exploratory study by Procaccino & Verner (2006) the mindset of software development project managers was investigated with regard to how they "define" a successful project in order to arrive at a richer perspective of "success" from their perspective. Components of the developed system (the project) were investigated in terms of some of the aspects of the delivered system (the deliverable). This was done in order to place traditional measures of success in context with other success measures that have been suggested in the literature. Only one of the three items traditionally used to measure success, quality (or meeting requirements), proved to be highly regarded in the investigation. The other two items, completing a project on time and within budget, did not appear to have much relevance for many of the respondents. These two items were among the lowest ranked items**.**

In an empirical study by Raz, Senhar & Dvir (2002) the usage of risk management is investigated and its relationship with project success. They conclude that when risk management is used, it seem to be working and appear to be related to project success. Risk management practices seem to be more applicable to higher risk projects and the impact of risk management is mainly on better meeting time and budget criteria and less on product performance and specification.

In another study by Shenhar et al. (2002) the main purpose was to refine the search for project success factors and to identify project-specific managerial variables that are critical to the success of industrial projects. Two of their major findings strongly suggest that successful project management is influenced by a rather wise spectrum of variables and also that project success factors are indeed contingent upon the specific type of project. The list of project success factors is far from universal.

Dvir et al. (2003) conclude in a paper examining the relationship between planning efforts and project success, that project success is insensitive to the level of implementation of management processes because of relatively high quality of modern computerized management tools and project management training. On the other hand, project success is sensitive to the level of requirements' definition and development of technical specification. Additionally they observe a significant positive relationship between the amount of effort invested in defining project goals and project success, especially in the eyes of the end-user. No effort should be spared in the initial stage of a project and the task cannot be achieved without the customer or end-user involvement in the process.

In a paper by Dvir & Lechler (2004) the interactions between three project planning variables, the quality of planning, goal changes, plan-changes and project success are analyzed. The results show that the positive total effect of the variable quality of planning is almost completely overridden by the negative effect of goal changes. Therefore they conclude that quality of planning positively affects both efficiency and customer satisfaction, while changes are acting in the opposite direction and compromising the project results.

Dvir (2005) also examines the relationship between planning and preparing the project for transfer to its final users and project success. In the paper Dvir concludes that projects performed under contract for a specific customer, should devote considerable efforts for planning and preparing in advance the hand-over of the project to its final users. Customer involvement in all phases of the project can highly contribute to the project success, especially to its efficient execution. His findings suggest that customer participation in the development process and final user preparations have the highest impact on project success.

On the same note Ingason (2006) focuses on the relationship between project success and project planning and the use of project management processes and procedures. In his paper Ingason concludes that an experienced project manager and/or individuals with technical academic backgrounds are likely to put emphasis on the technical preparation of their project, use of processes and procedures of project management also more likely. Their success rate in their projects is higher but Ingason notes that the study's correlation is not too strong so the results should be treated accordingly.

2.1.7 Multidimensional Critical Success Factor Frameworks

In a research by Shenhar & Wideman (1996) they confirm that project success is a multi-dimensional concept and cannot be assessed based on a single, or even two dimensional measuring. Their research reveals four primary categories of project success, which are

- Internal Project Objectives (efficiency during the project)
- Benefit to Customer (effectiveness in the short term)
- Current Contribution (in the medium term)
- Future Opportunity (in the long term)

They also create a classification for projects to assess correlation between tem-based primary success criteria and particular types of projects. They classify available project data in the research into four project types, namely:

- Type A - Established Technology;
- Type B - Mostly Established Technology;
- Type C - Advanced Technology; and
- Type D - Highly Advanced Technology

They observed the relative importance of the different categories of success varied with technological uncertainty. Specifically, the importance of meeting time and budget constraints is reduced with increasing uncertainty, while the impact the project has on the customer increases when moving from established technology to projects of higher technology, i.e. those of higher uncertainty. Finally they suggest that the four primary categories of project success, the four project types and, potentially, the three levels of project management complexity, provide a valuable framework for developing Principal Success Criteria.

On the same note Shenhar et al. (1997) introduced a multidimensional – multi-observational framework used to identify four universal dimensions of success. Namely:

- Project efficiency
- Impact on customers
- Business and direct success
- Preparing for the future

Shenhar noted that meeting design goals (time, budget and performance) was not a homogeneous dimension. Time and budget comprised one dimension as it was resource-related, but meeting specifications related to customer satisfaction. This was a significant distinction, as others to date had grouped the three elements into the Iron Triangle of time, cost and scope. Success also varies over the course of the project and product life cycle. The study placed customer satisfaction as the number one criterion for overall project success and put the Iron Triangle second.

The multidimensional concept is further discussed in a paper by Shenhar, Dvir, Levy & Maltz (2001) where the strategic perspective is emphasized and projects arer presented as powerful strategic weapons. The paper demonstrates how these dimensions should be addressed during the project's definition, planning, and execution phases, and provides a set of guidelines for project managers and senior managers.

In an exploratory interdisciplinary study by Dvir et al. (2006) the focus is on the relationships among three aspects: projects' types (profiles), project managers' personality, and projects' success. The hypothesis is that that projects managed by managers whose personality characteristics match their projects' profiles will be more successful and that managers will be more successful managing projects that fit their personality characteristics. The study's results lend tentative support to these hypotheses but the authors acknowledge that the fit between project managers' personality and management style and the types of projects they manage is crucial for projects' success.

2.1.8 Reinventing Project Management

Every operational process began as a project that put things in motion.

– Shenhar & Dvir, 2007

Shenhar & Dvir (2007) published a book on project success that represents the fruits of their collaboration in the field of project management since early 1990s.

Through their research, Shenhar and Dvir have observed that top managers frequently look at project budgets as a cost, and not as an investment. Their opinion is also that conventional project management body of knowledge forms a good basis for training and initial learning but may not suffice for addressing the complex problems of today's projects.

The book represents a framework that Shenhar and Dvir state is a more realistic approach to project management. The foundation to that framework is found in few critical questions the authors ask themselves:

- Can we help project teams make the right assessment before presenting their project proposal to top management?
- Can we show executives how to ask the right questions and foresee danger before they make a commitment to a project and before it is too late?
- Can we guide project teams in adapting their project management style to the circumstances, environment and tasks?

In the book the authors develop a new approach and a new formal model to help managers understand what project management is all about. The new approach is based on a success-focused, flexible and adaptive framework, called the *adaptive project management approach*. The authors explain the difference between their approach and the traditional project management approach.

The book presents a new multidimensional model for assessing and planning project success beyond the iron triangle of time, cost and quality and assumes that the project leader is responsible for achieving all the metrics of project success.

The model considers strategic and tactical aspects of project performance in the short and the long term. It also considers the points of view of different project stakeholders, including customers and business. An example for the model is given in Figure 3.

To address differences among projects, the authors present a diamond-shaped framework to help managers distinguish among projects according to four dimensions: novelty, technology, complexity and pace. These four dimensions the authors define as the four bases of successful projects.

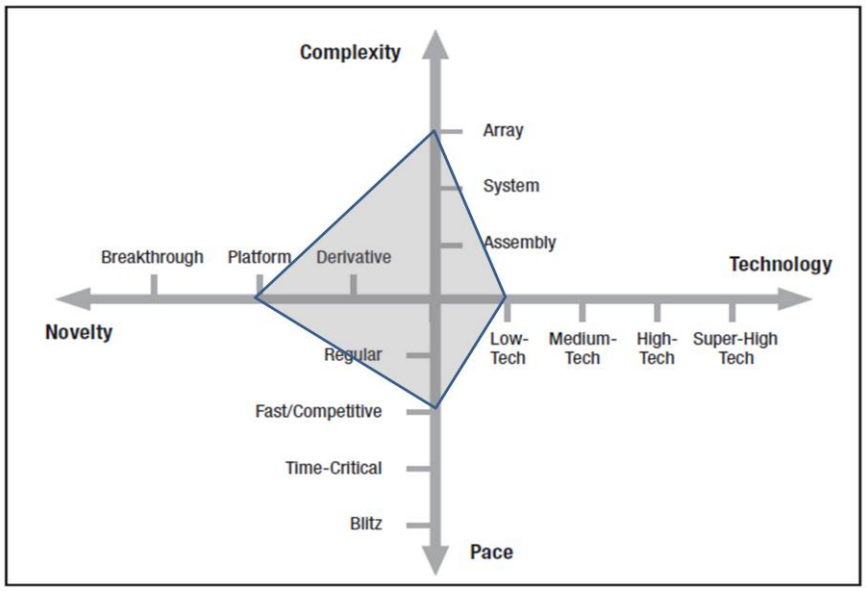

Figure 3: The diamond model or NTCP model (Shenhar & Dvir, 2007)

The diamond is designed to provide a disciplined tool for analyzing the expected benefits and risks of a project and developing a set of rules and behaviors for each project type. The usage of the diamond model is the core approach in the book which the authors built upon.

2.2 Literature on ethics in projects

There is not much to find in the project management literature about ethical aspects of projects or the effect of those aspects on project success. Some project managers have their code of ethics and professional conduct, such as the one described in the Project Management Institute's Codes of Ethics and Professional conduct (PMI n.d.).

Unethical actions on the behalf of the project manager can, for instance, make an impact on the success of the project he manages and, hence, become a success factor impacting the success of the project if not managed. The same might apply for a project of which entails processes that have unethical aspects, or the projects deliverables can have unethical qualities. The product itself is ethically sound but the project and its process that delivers it is not. Land mine is an example of an unethical deliverable. Here, the process could be ethically sound but the deliverable is not.

Nicoló (1996) introduced the concept of total ethical-risk analysis (TERAmethod), a method that aids project managers in decision making by taking into account sources of various ethical risks to the project's end-users. Examples of risks are potential moral and social harms, negative feedback from users and subsequent risks for the project's organization due to legal, economic and distrust. In his paper, Nicoló focuses on management of global distribution multimedia when demonstrating his method. Nicoló concludes by saying "*that dealing with applied ethics requires the adoption of both a particular anthropological model and specific theoretical foundations of normative ethics*".

A paper by Loo (2002) presents results from the development of a multidimensional measure of ethical dilemmas and decision-making in project management. Loo uses

vignettes to represent ethical dilemmas that can be found in three phases of most projects, according to him. These phases are; *planning*, *execution* and *termination*. Each vignette is then followed by Reidenbach and Robin's (1990) 30-item response scale tapping five theories of normative ethics, being *Justice*, *Relativism*, *Egoism*, *Utilitarianism* and *Deontology*. Vignettes are a kind of scenario or scenes that have relatively short narratives presenting key information or data pertinent to a situation. According to Loo they are a useful approach to presenting ethical dilemmas for gathering responses. What is interesting here is that Loo does not consider a deliverable of a project as part of the project or part of the decision-making process during a project.

Meredith and Mantel (2005) discuss ethics in relation to several topics including the request for proposals process, public safety, and the environment. The new IPMA Competence Baseline defines three interrelated areas of project management competencies; contextual, technical and behavioral. Ethics is one of the behavioral competencies, but it is very briefly and generally discussed.

Helgadóttir (2007) describes an action oriented experiment she conducted on students in a Masters of Project Management program at the University of Iceland. The aim of the experiment was to design a way to increase project managers' critical and moral thinking skills and to provide them with a base of knowledge of moral theories. In the experiment, Helgadóttir builds on ideas from Loo (2002), by asking the students to stage vignettes from different perspectives using four ethical theories. The findings of the experiment indicate that teaching project managers in a very succinct manner to think about the ethics of projects will result in a marked change in the way they view project selection, purpose, risks, stakeholders, goals and outcomes.

In a paper by Jónasson (2008) some classical ethical theories are considered and their relevance illustrated when used to assess possible ethical risks in projects. By viewing the theories in terms of ethical risk, ethics in project management can boil down to questions such as: Should we do it? Should we not? What should we do? How should we do it?

Jónasson considers two outcome oriented ethical theories, V*irtue* and *Utilitarianism*, and two process oriented ethical theories, *Duty* and *Principles based on rights*.

By going systematically through these principles and locating possible risk factors in the projects, project managers should be well aware of the possible ethical issues at stake and could treat them appropriately.

Jónasson concludes that the process could be important when it comes to project choice to estimate the ethical challenges that the project implementation might provoke and prepare actions to meet these challenges.

2.2.1 Four ethical principles

Classical ethics theories are introduced here as representing four components in the context of outcome and process in an attempt to generate a common basis for understanding (Árnason, 1993). The first component and first outcome-oriented ethic is *virtue ethics*, focusing on how one chooses to live his or her life, striving to excel it. The second component and also second outcome-oriented ethic is utilitarianism or utility and is primarily concerned with what in life is most important. The third component and first process-oriented ethic is *rights*, where there are specific rules that dictate what is right and what is wrong. The fourth and last component consists of principles based on rights and obligation, and is the second process-oriented ethic.

2.2.2 Outcome-oriented ethics

The outcome-oriented ethics emphasize the outcome of one's actions, be it good character, virtue or value in *Virtue ethics theory* or good results, outcomes, consequences in *Utility ethics theory*. These two theories are the best known outcome-oriented theories.

Virtue

A virtuous knife is an excellent knife, very sharp. In virtue ethics theory the basic idea is that humans, like all things, have a specific nature or essence. As acorns develop into mighty oaks, humans begin in the womb and realize their full or complete being, becoming excellent, when fully mature (Baggini & Fosl, 2007). Aristotle defines two kinds of virtue: moral and intellectual. Moral virtues are exemplified by courage, temperance and liberty, whereas the key intellectual virtues are wisdom, and understanding. Wisdom governs our ethical behavior and understanding we primarily express through scientific attempts to achievements (Jónasson, 2008).

Utilitarianism

Utilitarianism**,** or utility, is originated in the writings of philosopher David Hume (1711-1776) and was further developed by Jeremy Bentham (1748-1832) and John Stuart Mill (1806-1873) (Rachels, 1997). In Bentham's mind there was only one ethical principle, *utilitarianism*, which dictates that we should always choose our actions based on what is best for as many people as possible. If the outcome of your actions is more happiness for more people, then that is what you do. Through this philosophical idea of utilitarianism, Bentham argued that the right act or policy was that which would cause "the greatest good for the greatest number of people"(Rachels, 1997; Árnason, 1990).

2.2.3 Process-oriented ethics

The process-oriented ethics focus on moral obligations and moral principles, the rightness or wrongness of intentions or motives behind action such as respect for rights, duties, or principles. Opposed to this is the rightness or wrongness of the consequences of those actions (Olson, 1967).

Duty

The process oriented ethics maintain that the process used to derive at an action/decision predicts its rightfulness or integrity. The first of two principles here is duty, or deontological ethics, primarily based on the ethics of the German philosopher Immanuel Kant (1724-1804).

In Kant's view, the sole feature that gives an action a moral worth is not the outcome that is achieved by the action, but the motive that is behind it. The categorical imperative is Kant's famous statement of this duty (Jónasson, 2008)**.**

A categorical imperative denotes an absolute, unconditional requirement that exerts its authority in all circumstances, both required and justified as an end in itself. Its first formulation is best known: *Act only according to that maxim whereby you can at the same time will that it should become a universal law* (Kant & Wolff, 1969). According to

Jónasson (2008) we could restate this for our purpose as follows: "Undertake projects only according to a maxim that you would like to establish as a universal law."

On this view morality is concerned with duties and principles that require moral agents to behave in specific way regardless of the consequences. As such, the claims of these duties and principles may trump those of the greater good or the good of the majority (Baggini & Fosl, 2007)**.**

Rights

The second type of process oriented ethics is Thomas Hobbes´ (1588-1679) Natural Rights Theory which he presented in his book, *Leviathan* (1651). Hobbes was an English philosopher and is remembered today for his work on political philosophy. His ideas gave rise to the social contract theory but around the same time the English philosopher John Locke (1632-1704) also presented his ideas about the contract theory in his book, *Second Treatise of Government* (1689) (Stanford Encyclopedia of Philosophy 2009).

Hobbes argued that it is human nature to love one's self best and seek one's own good. The core of the social contract is the notion that "morality is embedded in rules which dictate how people should treat each other, rules that sensible people agree to obey for mutual benefits, provided others obey them as well" (Rachels, 1997) and according to Locke, we do not have any innate moral ideas. Consequently, the criterion of what constitutes an ethically sound action is only based on our sense of well-being. Our rights, according to Locke, are determined and given to us by nature (or God), and comprehended by us rational beings that are both rational and dependent upon each other (Jónasson, 2008).

3 RESEARCH METHOD

The process applied in this research can be summarized in the following bullets:

- Search for articles and material about the subject and review.
- Re-evaluate the research scope in context with increased literature knowledge.
- Perform a qualitative research in the form of a discussion about the research questions with experienced project managers in the field.
- Perform a quantitative research with a survey focusing on IPMA certified project managers.

Further details on the method are discussed in the following chapters.

3.1 The focus group

The focus group for the research was all IPMA certified project managers in Iceland. A short introduction the IPMA program was given in chapter 1. By choosing this focus group the idea is to minimize noise or bias in the results from individuals that do not have proper knowledge of the project management methods but have the status "project manager" in their organizations. By focusing on the IPMA certified project managers, certain standard in knowledge by the project managers should be guaranteed in the responses. A complete list of all IPMA project managers in Iceland was not readily available at the beginning of this research and had to be assembled of information from two sources. Birthdays for individuals in the group were not included were difficult to collect due to incomplete information. Using the national registry records was not viable due to multiple names issues.

3.2 The survey design

No similar surveys or work were known beforehand that could have been used as a comparison on this particular research in context with the topic. No similar surveys were either encountered during the research. In this respect, the focus of the survey is quite unique and introduces a certain level of novelty.

The Likert scale was used in all the topic oriented questions but it is wildly used when surveys are part of research methods. The survey contained only closed questions. The reason for this is due to the large amount of questions in the survey making it tedious enough for the respondents. Any open question on the topic would have to be a part of a qualitative research in some future work.

The layout for the project success statements is based on a *project success assessment questionnaire* displayed in Dvir's and Shenhar's recent book, *Reinventing project management* (Shenhar & Dvir, 2007). The idea behind the usage of this particular questionnaire was to get an overall assessment from project managers on their projects. The results should outline a trend, indicating how successful the project managers generally are with their work.

Most of the statements were arranged so that they made a strong impact on the respondents and made them choose their answers carefully. In some statements the phrase "almost

always …" was used instead of just "always …" but the reason for this is that the latter choice would have been too strong and would not have yielded any answers.

The layout for the ethical statements is based on four classical ethical principles explained in chapter 2.2 and Jónasson´s guidance. Asking project managers about ethical matter in the manner seen in the survey certainly includes some degree of novelty.

3.3 Search for material

An extensive search was done on the following electronic databases

www.hvar.is – Access portal to electronic databases and E-journals by the **Iceland Consortia for electronic subscriptions.**
www.proquest.com – Electronic information resources.
www.sciencedirect.com – Electronic portal to Elsevier material.
www.springerlink.com – Electronic information resources.

with keywords like "project management", "project success", "ethics in projects" and "ethics in project management". A search was also done with the help of Google and the same set of keywords. The search resulted in about 90 articles and references to books and E-journals. Not all of the material gathered was used.

3.4 Re-evaluation of the research's scope

The process of reading and re-reading the articles was time consuming because many of the concepts portrayed were loaded with meaning and context, not easy to grasp when practical project management experience is lacking by the reader. After reading all the articles two or three times the understanding for the material was increased and the landscape of project management success was better understood. This gained understanding and shaped the next steps of the project considerably.

3.5 Qualitative research

Two experienced project managers were invited to an introduction of the project. Following the introduction there took place a discussion about the project with focus on the relevance of the research questions and the scope of the project. The discussion was insightful and aided further in sharpening the focus of the research questions. A second re-evaluation of the projects scope took place following the qualitative research and with that a better focus was realized and emphasis was put on an ethical approximation to project success.

3.6 Quantitative research / survey

A work was done in further defining the ethical scope and how ethics are part of projects. A concept of a framework for evaluating ethical aspects in projects was developed and following that a list of questions for the qualitative part of the research was compiled. Creating the questions was an iterative process that went for more than few rounds. The

statements were both concerning success in projects and ethical perspectives. A long list of statements was created using the Likert scale for measuring as mentioned before. After the first round there were about 70 statements in total, on paper.

Research question one and three are rather straight forwardly answered but question two is open and general and must be properly treated. To answer it the focus was put on six perspectives where success is a factor according to Dvir et al. (2001). These perspectives are *success in projects* according to traditional criteria of time, cost and quality, *impact on the customer*, *impact on the project team*, *business prosperity and impact on the organization*, *impact on the future*, *overall success*.

To verify the usefulness of those statements they were put on trial in a class of 32 students doing their Masters in Project Management. The survey at this point was in three parts; background questions used in processing the results of the survey, statements focusing on general project success and then statements focusing on ethical factors in projects that can possibly contribute to the project's success. It took the MPM students about 35 minutes to finish the survey at this point. The results gathered from this trial gave a clear idea of which statements were too leading and which statements were simply too complicated. Most of the students had no trouble finishing the statements for project success but the statements for the ethical factors were in places too philosophical. All in all the results were invaluable for the reviewing of the survey.

The statements for the project success part were also reviewed and rewritten under influence from the book Reinventing Project Management by Dvir and Shenhar(2007).

The domain of survey participants was defined as all IPMA certified project managers in Iceland. By choosing this domain the aim was to minimize possible bias or noise in the results due participant's poor knowledge of the project management concepts. The survey went through iterations of improvements and reviews and on the 21st of March the survey was sent to all participants. The data and the results from the survey are discussed in chapters 4 and 5.

4 PRESENTATION OF THE DATA

The survey was sent via email to all IPMA certified project managers in Iceland or 220 people. A list of email addresses was acquired from the Icelandic Project Management Association and also from the MPM Program Office at the University of Iceland. About 10 emails "bounced" back but 5 of them were corrected and sent back. It is very likely that not all the email addresses are actively used by their owners so 100% coverage is not guaranteed. Of the 215 project managers that are presumed to have received the survey, 97 started it, resulting in 60% total started rate, and 72 completed it, resulting in 44% total completed rate.

4.1 The background variables

Survey Question 1 - Gender?

The question is a standard survey question. The following figure displays the gender ratio in the survey. Response ratio for this question was 46%. The results were as follows.

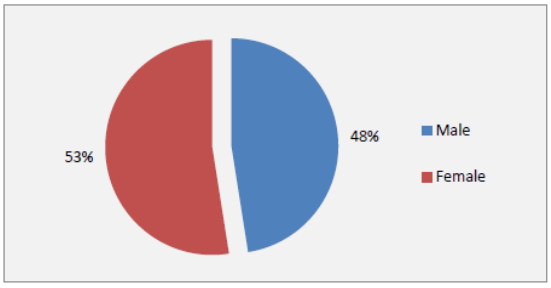

Figure 4: Gender distribution

Survey Question 2 - Age?

The question is a standard survey question. The following figure displays the age distribution in the survey. No respondent was younger than 21 years of age or older than 60. 99 Response ratio for this question was 46%. The results were as follows.

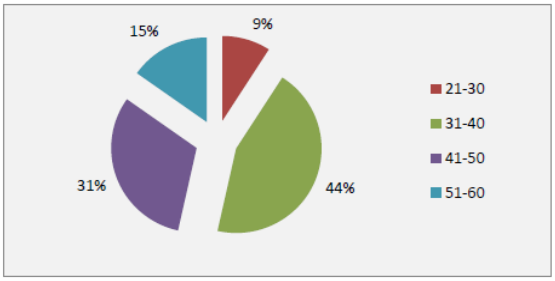

Figure 5: Age distribution

Survey Question 3 - What undergraduate degree have you finished at University level?

This question is based on the demography found in the MPM program at University of Iceland. The following figure displays what undergraduate degrees the respondents have. Response ratio for this question was 45%. The results were as follows.

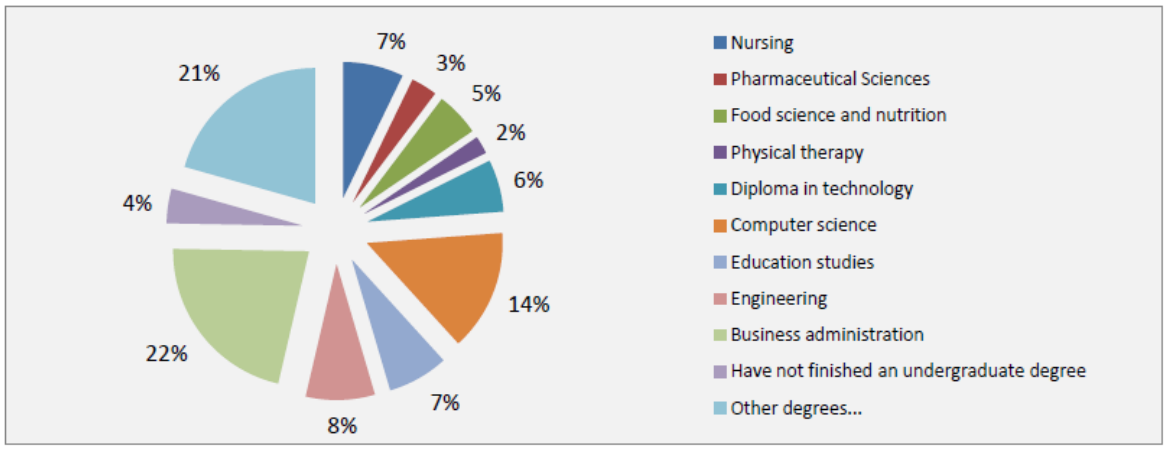

Figure 6: Distribution of undergraduate degrees among the respondents

In the "Other degrees…" category was the following: Teaching, civil engineering, geology, nature science, media science, psychology, physics, art and finally mechanics/electronics.

Survey Question 4 - What graduate degree have you finished at University level?

This question, like the previous one, is based on the demography found in the MPM program at University of Iceland. The following figure displays what graduate degrees the respondents have. Response ratio for this question was 43%. The results were as follows.

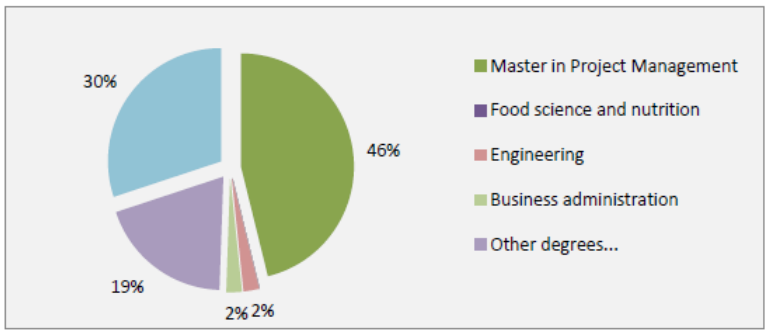

Figure 7: Distribution of graduate degrees among the respondents

In the "Other degrees…" category was the following: MPM, Am studying MPM, Civil engineering and MPM, Nursing and MPM, School counselor, Cand.negot, am finishing MPM, Master in nature science and MPM, am studying MPM

Survey Question 5 - Which of the following IPMA certificates have you finished?

This question is based on the IPMA certification levels Response ratio for this question was 44%. The results were as follows.

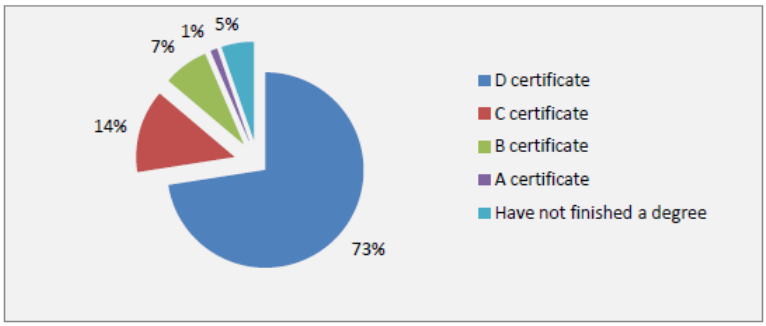

Figure 8: Distribution of IPMA certifications among the respondents

Survey Question 6 - Which of the following project management concepts and methods have you studied?

This question's purpose is to measure recognition by the respondents for few common project management concepts and methods. Response ratio for this question was 45%. The results were as follows.

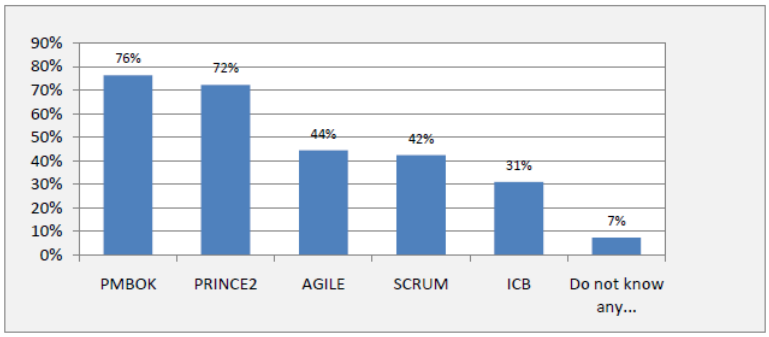

Figure 9: Distribution of knowledge of project management concepts and methods

Survey Question 7 - Which of the following quality concepts and methods have you studied?

This question is based on the book "*Afburðarárangur*" (Gunnarsdóttir & Ingason, 2007) that discusses popular management methods with focus on quality management. Response ratio for this question was 45%. The results were as follows.

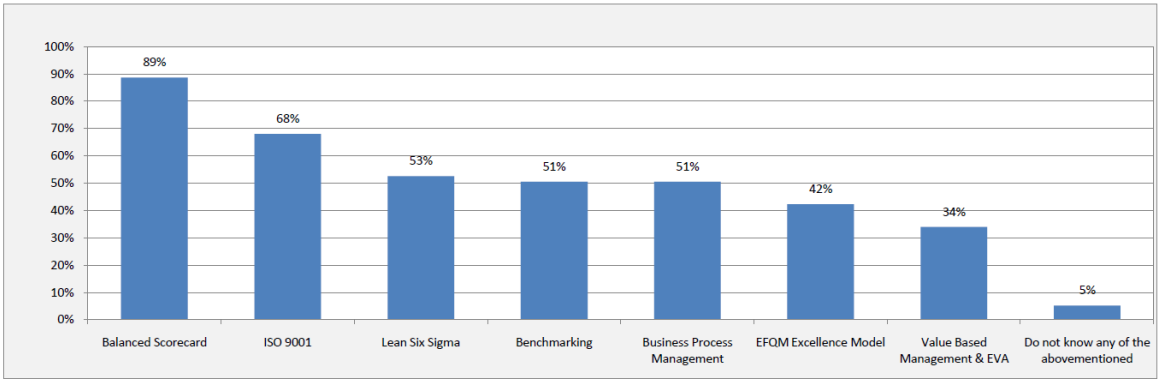

Figure 10: Distribution of knowledge of quality management concepts and methods

Survey Question 8 - How long have you been working as a project manager?

This question has the purpose of measuring project managers' work experience, measured in years. Response ratio for this question was 42%. The results were as follows.

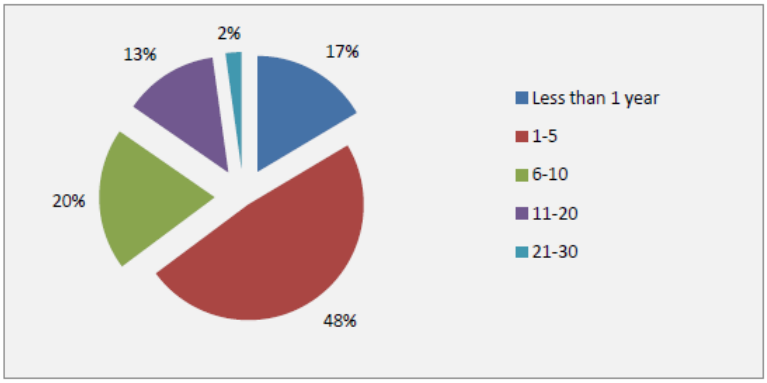

Figure 11: Distribution of project managers' work experience

Question 9 - What is your company's main field of business?

This question is based on ÍSAT 2008, which is a categorization of Icelandic industries. The ÍSAT 2008 list is based on a categorization of industries defined by the EU. The question was then updated after receiving some comments from the MPM pilot group mentioned in chapter 3.6. Response ratio for this question was 42%. The results were as follows.

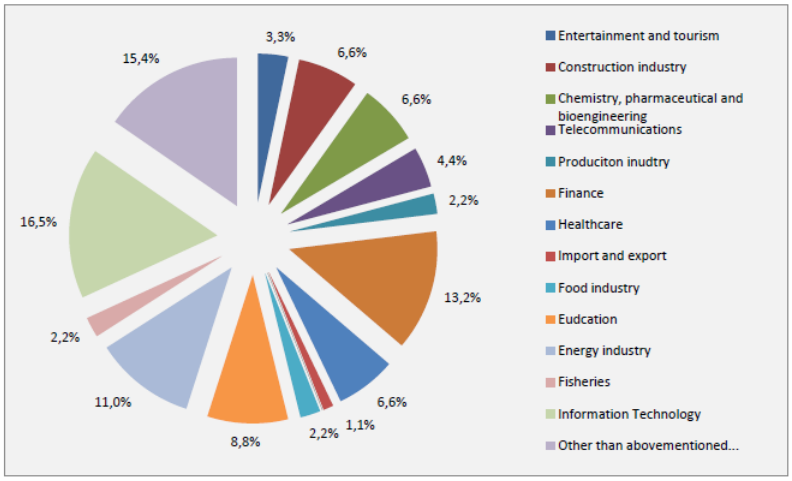

Figure 12: Distribution for organizations' main field of business

In the "Other than abovementioned…" category was the following: The Governmental sector and research, The Governmental sector, The Governmental sector, Software, Development of machinery for heavy industry, Airplane leasing, Research and consulting in the food industry, fish industry and agriculture, consulting, The Governmental sector, non-profit projects.

Survey Question 10 - What market(s) does your company serve?

This question is based on a categorization for *Markets served*, presented in the article *Project Success: A Multidimensional strategic concept* by Shenhar et al. (2001). The categorization is displayed in table 2 in the article. Response ratio for this question was 41%. The results were as follows.

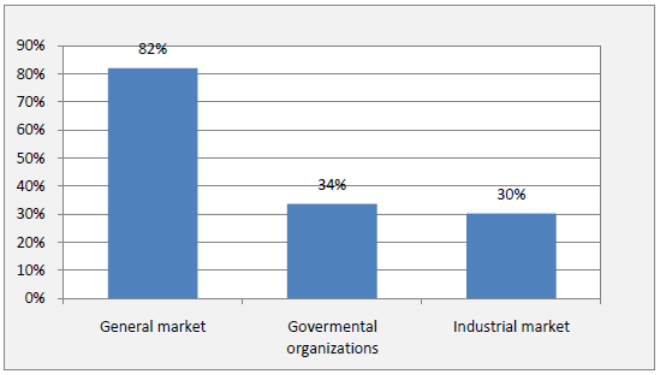

Figure 13: Distribution of markets served by the respondents' organizations

Survey Question 11 - What are the main types of projects in your organization?

This question is based on a categorization for *Project type*, presented in the article *Project Success: A Multidimensional strategic concept* by Shenhar et al. (2001). The categorization is displayed in table 2 in the article. Response ratio for this question was 42%. The results were as follows.

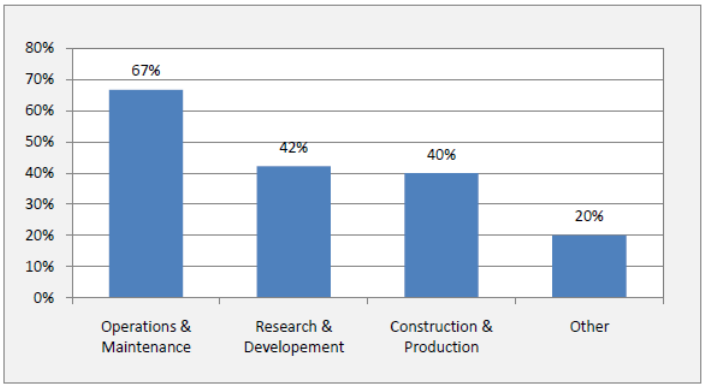

Figure 14: Distribution for the main types for projects

In the "Other than abovementioned…" category was the following: Development of procedures and processes, Reinvestments, Sales and distribution, continuous maintenance, quality management, Sales projects, Policy development projects, Organizational projects and event management projects, Constructional projects.

Survey Question 12 - How technically uncertain are the projects you manage?

This question is based on a categorization for *Level of project technical uncertainty*, presented in the article *Project Success: A Multidimensional strategic concept* by Shenhar et al. (2001). The categorization is displayed in table 2 in the article. Addition made to the categories is the *Non-technical* category. Response ratio for this question was 42%. The results were as follows.

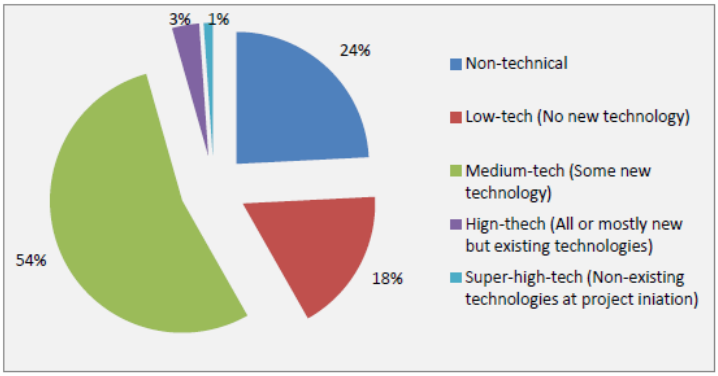

Figure 15: Distribution for projects' technical uncertainty

Survey Question 13 - What are the average man hours in projects that you manage?

Here the project managers are asked about the average length of their projects in months. One month being around 160 work hours. Response ratio for this question was 42%. The results were as follows.

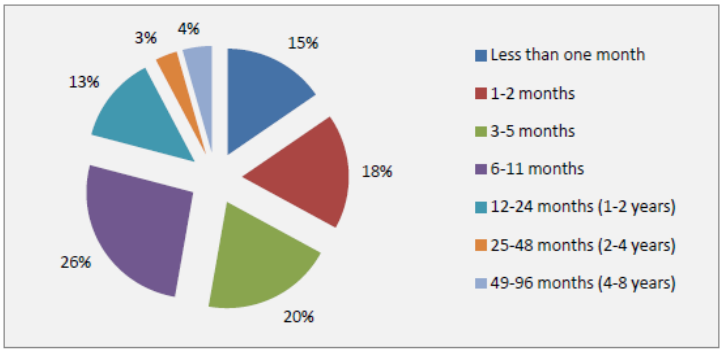

Figure 16: Distribution of projects' average length in months

Survey Question 14 - How well do you utilize your project management knowledge?

Here the participants are asked to evaluate their use of project management theory and methods in their practice. Response ratio for this question was 42%. The results were as follows.

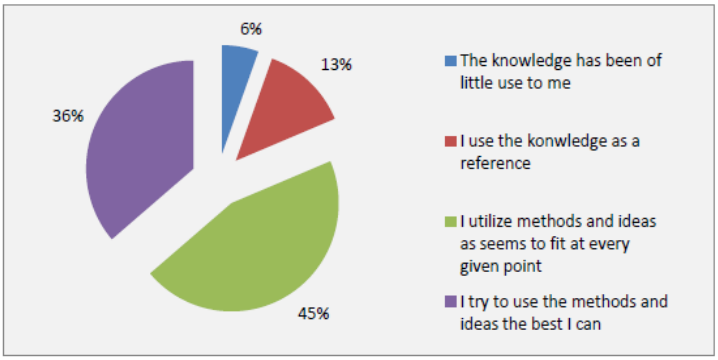

Figure 17: Distribution of utilization of project management knowledge

4.2 The success statements

Questions 15 and 16 in the survey draw their background from general project management knowledge. The questions are actually a group of statements. Question 15 is meant to give us opinions on a few interesting statements that the project managers might have. Question 16 asks project managers how things are done in their organization in context of preparing project goals, evaluating if the most basic goals of time, cost and quality are defined. The layout for the project success questions 17 through 22 is based on a *project success assessment questionnaire* displayed in Dvir's and Shenhar's recent book, *Reinventing project management* (Shenhar & Dvir, 2007). The idea behind the usage of this particular questionnaire was to get an overall assessment from project managers on their projects using this layout. The results should outline a trend, indicating how successful the project managers generally are with their work. The statements and results are presented here below. The maximum values are highlighted with dark-grey color.

Survey Question 15 - Statements of general opinions

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
There is a weak connection between success criteria and risk factors	16%	31%	31%	16%	5%	2%
The project manager's ethical sense has a great impact on project success	0%	7%	7%	43%	40%	2%
It is important to evaluate project plan's integrity before it is put into action	0%	2%	2%	29%	65%	1%
It is difficult to evaluate project plan's integrity	4%	38%	27%	27%	5%	0%
I have good knowledge of project management concepts	0%	5%	2%	45%	48%	0%
My organization utilizes project management methods	13%	21%	9%	32%	22%	4%

Table 1: Statements of general opinions

Survey Question 16 - Statements of project execution

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
Project plan is made for all projects that I am a part of	10%	19%	10%	31%	30%	0%
Project plans are always reviewed before execution in my projects	13%	18%	16%	35%	18%	0%
Measurable goals for time are always defined in my projects	2%	12%	7%	37%	41%	0%
Measurable goals for cost are always defined in my projects	5%	12%	15%	40%	29%	0%
Measurable goals for quality are always defined in my projects	2%	11%	16%	40%	31%	0%
Measurable goals for customer satisfaction are always defined in my projects	5%	15%	27%	37%	17%	0%

Table 2: Statements of project execution

Survey Question 17 - Statements of success in projects

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
In almost all cases my projects are finished on time	2%	30%	19%	41%	6%	1%
In almost all cases my projects are finished within budget	0%	17%	37%	41%	1%	4%
My projects normally undergo small changes during project execution	12%	47%	18%	18%	4%	1%
Other criteria, defined in my projects, are normally within limits	1%	6%	40%	45%	2%	5%

Table 3: Statements of success in projects

Survey Question 18 - Statements of impact on the customer

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
My projects' deliverables almost always increase the customer prosperity	0%	2%	7%	61%	24%	5%
Customers are almost always satisfied with the deliverables of my projects	0%	0%	12%	63%	21%	5%
My projects' deliverables almost always fulfill the customers' requirements	0%	0%	11%	62%	22%	5%
Customers use my projects' deliverables	0%	0%	7%	48%	40%	5%
The customer almost always asks for further work from my organization	0%	1%	20%	42%	31%	7%

Table 4: Statements of impact on the customer

Survey Question 19 - Statements of impact on the project team

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
My project team is always happy and active in our projects	0%	0%	20%	66%	11%	4%
My project team is always loyal to our projects	1%	7%	29%	49%	9%	5%
My project team is always energetic and in good spirit in our projects	0%	3%	18%	60%	16%	4%
My team always enjoys working on our projects	0%	4%	13%	65%	15%	4%
Individuals in my project team feel they experience personal growth through our projects	0%	1%	23%	53%	19%	4%
My team members always want to stay with our organization	0%	0%	12%	63%	19%	7%

Table 5: Statements of impact on the project team

Survey Question 20 - Statements of business prosperity and impact on the organization

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
My projects almost always result in an economic success for my organization	0%	3%	17%	57%	12%	12%
My projects almost always increase the profitability of my organization	0%	4%	26%	45%	8%	17%
My projects almost always have a positive return on investment for my organization	0%	5%	32%	41%	7%	16%
My projects almost always increase my organization' s market share	0%	9%	37%	25%	7%	22%
My projects almost always contribute to shareholders value	1%	3%	30%	40%	7%	20%
My projects almost always contribute to the organization's direct performance	0%	0%	11%	67%	16%	7%

Table 6: Statements of business prosperity and impact on the organization

Survey Question 21 - Statements of impact on the future

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
My projects' outcomes almost always contribute to future projects	1%	0%	12%	67%	15%	5%
My projects almost always lead to additional new products	1%	1%	33%	43%	15%	7%
My projects almost always help create new markets	0%	10%	43%	23%	4%	20%
My projects almost always help create technologies for future use	1%	14%	30%	31%	4%	20%
My projects almost always contribute to new business processes	3%	15%	32%	25%	13%	12%
My projects almost always help creating new projects and new products	1%	5%	33%	43%	11%	7%

Table 7: Statements of impact on the future

Survey Question 22 - Statements of overall success

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
Project management in my projects is always successful	0%	7%	22%	66%	3%	3%
The deliverables of my projects are always successful	0%	3%	24%	68%	3%	3%

Table 8: Statements of overall success

4.3 The ethical statements

The layout for the ethical statements is based on four classical ethical principles explained in chapter 2.2. The statements and results are presented here below. The maximum values are highlighted with dark-grey color.

Survey Question 23 – Statements of ethics in project management – General

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
Conversations about ethical issues takes place in my projects	4%	25%	21%	41%	10%	0%
Ethical issues come up in projects that I manage	1%	21%	23%	43%	11%	1%
Knowledge in ethical theory should be part of the project manager's skill-set	0%	0%	5%	31%	64%	0%
I have studied ethical theory	3%	3%	4%	28%	62%	0%
It is the project manager's responsibility to conduct a ethical risk assessment	1%	1%	16%	46%	32%	3%
It is the project owner's responsibility to conduct a ethical risk assessment	4%	4%	19%	45%	26%	3%
Risk assessment is always conducted in my projects	0%	18%	19%	36%	27%	0%
Ethical risk assessment is always conducted in my projects	8%	30%	30%	23%	8%	1%
Ethical risk assessment should be conducted in projects	0%	0%	18%	42%	38%	3%
The project manager is responsible for the project's financial aspects	0%	3%	16%	34%	47%	0%
The project manager is responsible for the project team's welfare	0%	7%	12%	41%	41%	0%
Project manager should have sound knowledge of ethical theory to base his decisions upon	0%	0%	5%	43%	51%	0%
The society must accept projects' deliverables and consequences	0%	7%	18%	35%	41%	0%
Many projects impact people’s rights in a constraining way	14%	32%	24%	19%	3%	8%
I have all the necessary tools to evaluate ethical risk in projects	0%	15%	34%	45%	4%	3%
I would consider contacting a specialist in ethical theory to get an opinion on an ethical issue	1%	14%	15%	38%	32%	0%

Table 9: Statements of ethics in project management – General

Survey Question 24 – Statements of ethics in project management – Virtue

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
Successful projects are projects that I can be satisfied with when finished	0%	1%	7%	35%	57%	0%
Successful projects are projects that create more prosperity for may individuals rather than few	0%	0%	21%	38%	40%	1%
I can proudly tell my relatives about all my projects	1%	3%	6%	35%	55%	0%
I can proudly tell my relatives about the execution of all my projects	1%	3%	7%	40%	49%	0%
I can proudly tell my relatives about the derivatives and consequence of all my projects	1%	3%	6%	40%	50%	0%
Virtuous project manager is one that does what he is told	31%	38%	22%	7%	1%	1%
All my projects aim to increase satisfaction and pleasure	4%	17%	35%	26%	14%	4%

Table 10: Statements of ethics in project management – Virtue

Survey Question 25 – Statements of ethics in project management – Utility

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
It is only justifiable to start a project if it increases accumulated happiness of all interest groups	6%	29%	33%	18%	11%	3%
All my projects increase the happiness of my project team	0%	14%	54%	28%	3%	1%
All my projects have increased the happiness of my organization	0%	14%	43%	36%	4%	3%
All my projects have increased the happiness of my customer	0%	10%	36%	41%	10%	3%
All my projects have increased the happiness of my society	0%	15%	58%	18%	6%	3%
I choose and execute my project in such a way that they create as much happiness as possible for as many as possible	3%	18%	47%	19%	10%	3%

Table 11: Statements of ethics in project management – Utility

Survey Question 26 – Statements of ethics in project management – Duty

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
I only choose projects that I would like everyone else to choose if they were in my position	7%	27%	34%	23%	6%	3%
As a project manager I have duties to my project team	0%	0%	3%	51%	46%	0%
As a project manager I have duties to my organization	0%	0%	6%	46%	49%	0%
As a project manager I have duties to my customer	0%	0%	6%	46%	49%	0%
As a project manager I have duties to my society	0%	4%	21%	44%	31%	0%
My duties to my organization come before my duties to my customer	4%	19%	32%	31%	10%	4%
My duties to my organization come before my duties to my society	8%	26%	38%	22%	1%	4%
All my actions as a project manager can be universal for all other project managers	3%	6%	48%	35%	7%	1%

Table 12: Statements of ethics in project management – Duty

Survey Question 27 - Statements of ethics in project management – Rights

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Does not apply
Everyone has the same rights	7%	14%	14%	21%	37%	6%
I execute all my projects with the idea that everyone has the same rights	6%	7%	18%	29%	38%	3%
I have accepted my rights as a project managers from the society	6%	25%	24%	18%	11%	17%
It is the project team's right that I protect it's rights	0%	4%	17%	47%	26%	6%
It is the organization's right that I protect it's rights	0%	4%	26%	43%	21%	6%
It is the customer's right that I protect it's rights	0%	1%	22%	40%	32%	4%
It is the society's right that I protect it's rights	0%	4%	32%	38%	24%	3%
The organization's rights come before the customer's rights	10%	35%	35%	10%	6%	4%
The organization's rights come before the society's rights	25%	30%	34%	6%	1%	4%

Table 13: Statements of ethics in project management – Rights

5 DISCUSSION

5.1 The background

It is interesting to note how even the ratio is between men and women participating in the survey but 48% of participants are men and 52% are women. This can be seen in Figure 4 in the previous chapter. Of the women who answered the survey, about 83% are 31-50 years old while 68% of the men are in the same interval. Figure 18, here below, displays these statistics.

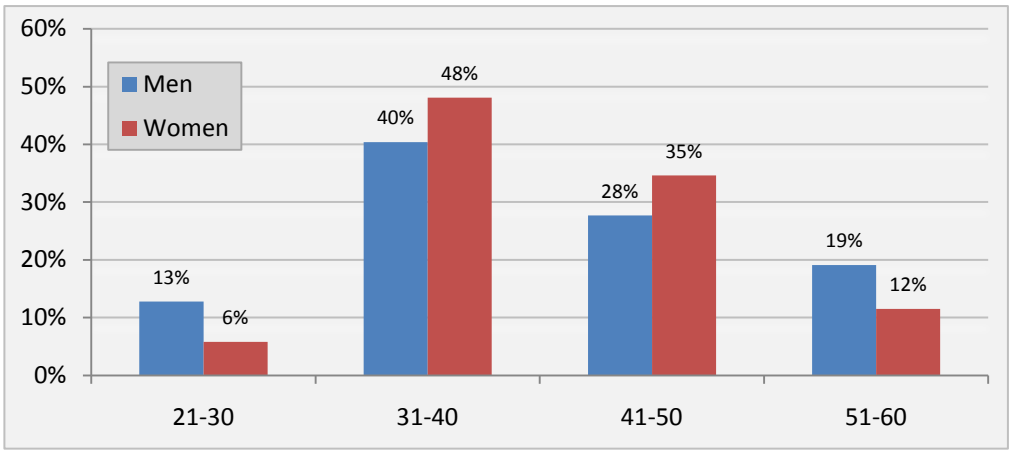

Figure 18: Age distribution according to gender

Figure 19 here below displays the gender ratio between sent survey requests and responses. The response ratio is representative for the whole.

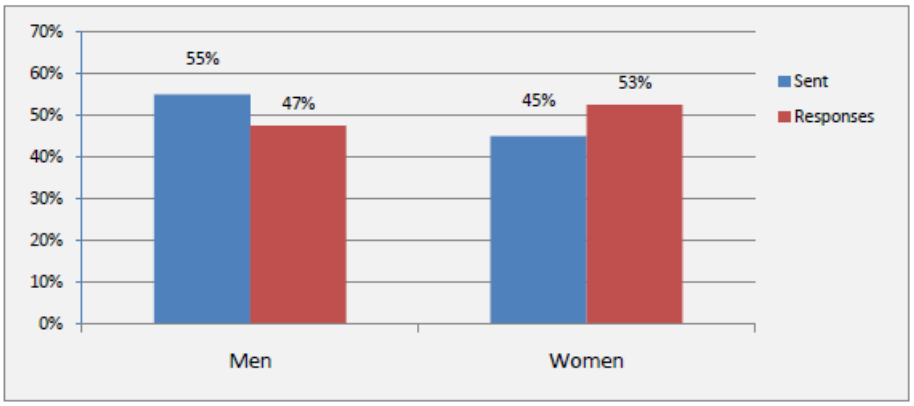

Figure 19: Gender distribution between sent emails and responses

Another interesting result is the apparent low average age of the project managers but about 54% of the project managers are between 21-40 years old.

94% of the project managers have finished undergraduate studies, and 22% thereof have business degrees. About 70% have finished graduate studies and 66% thereof have finished a Master in Project Management degree.

About 73% of the project managers have finished IPMA D-certification, 14% C-certification, 7% B-certification and 1%, or one individual A-certification. Then there were five project managers that have, for some reason, not finished any IPMA certification, but the target group for the survey was IPMA certified project managers. The reason for this error is not clear. In speculating the reason, it may be that these project managers participated in the certification program and did not finish it, but were still included in the email list.

The project managers were asked which project management concept they have studied and/or are familiar with and most were quite familiar with almost all the concepts but about 6% did not know any of them. Most of the project managers, about 77%, are familiar with PMBOK, and following closely behind is the PRINCE2 framework with 73% familiarity.

Questions about familiarity to quality methods were also posed and about 95% recognized one or more from a list of quality concepts. Of all the concepts the most familiar one, with 89%, is the Balance Scorecard.

The project managers were asked how long they have been in the field and about 65% have been working as project managers for 5 years or less, which makes the average work experience rather low.

When project managers were asked about their organization's main field of business, the answers were equally distributed across the different fields. The distribution can be viewed in Figure 12 in chapter 4. Of "Other" answers the most common were in the fields of governmental affairs and various consulting businesses. When the project managers were asked what markets their organizations were serving, their response was that 82% sell products or service to the public market, about 30% serve various industries and about 34% serve governmental organizations. The project managers could give more than one answer, to this question because many of the organizations serve more than one market.

The project managers were asked to categorize their projects by type, based on categorization by Shenhar et al. (2001). 80% of the project managers were able to categorize their projects according to the given list but 20% put their projects in the "Other" category. When the "Other" category results are analyzed it seems that some of the project managers did not realize that their projects' types were actually in the list. One example of this is quality management projects, but one of the participants did not associate it with operational management. Quality management is part of operational duties and operational management.

Project complexity was the next thing to be measured and the project managers had five answers to choose from, from the projects being non-technical to containing new and untested technology or technology still in development. 95% of all the answers were on and within the third level of complexity, that is the technology used in the projects is well known but contains also some new components. Figure 15 in the previous chapter explains the five categories and presents the statistics. This means that 95% of the projects are not too complex in technical context. Only 3% of the project managers categorized their projects as orienting around new and untested technology and 1%, or one project manager, answered that his projects oriented around technology still under development. 79% of the project managers are managing short-term projects, only lasting one year or less.

Finally the project managers were asked how well they utilized their project management knowledge in projects. According to their replies most of them try utilizing the knowledge the best way possible and use the methods and tools available to them.

5.2 Answer to Research Question 1

Question:

Do project managers generally measure the success of their projects in terms of time, cost, quality, and customer satisfaction?

Answer:

The statements in survey question 16 were as follows:

- Measureable goals for time are always defined in my projects
- Measureable goals for cost are always defined in my projects
- Measureable goals for quality are always defined in my projects
- Measureable goals for customer satisfaction are always defined in my projects

According to the survey, about 79% of the project managers define measurable time goals for their projects, about 70% define measurable cost goals, 71% define measurable quality goals and about 55% define measurable goals for customer satisfaction.

The difference between customer satisfaction criteria and the other project success criteria is interesting as it seems that project managers put less emphasis on customer satisfaction criteria.

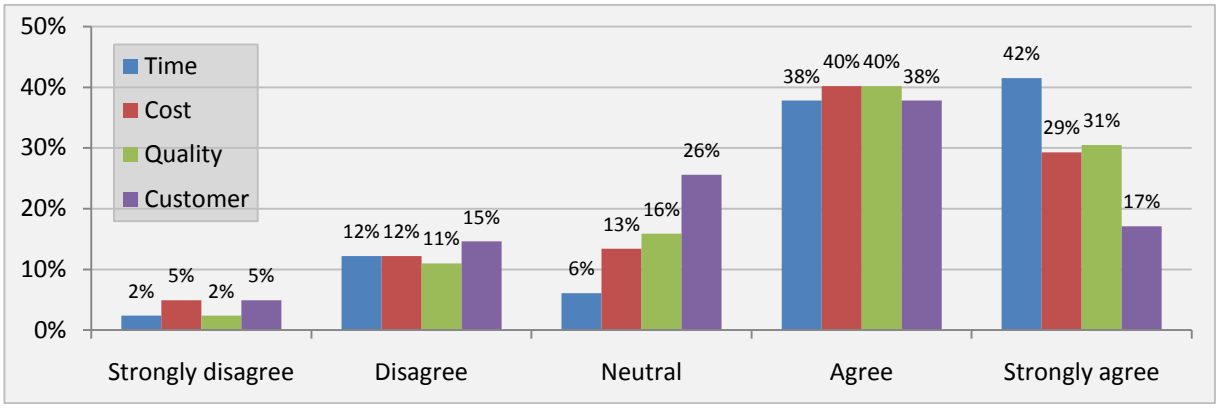

Figure 20: Distribution for emphasis on the major success criteria in projects.

It can be concluded that project managers generally define project success criteria according to tradition, with time, cost and quality but with less emphasis on customer satisfaction.

5.3 Answer to Research Question 2

Question:

How well are project managers managing their projects?

Answer:

Statements on efficiency (Survey question 17)

Statements on efficiency were presented in the survey in chapter 4.2 along with statements on impact on the customer, the project team, the business and organizational success. 59% of project managers agree that their projects undergo changes to some point during the project's execution. This fact also reflects in other results where only 47% of project managers answer that their projects always finish on time, 42% say that their projects finish within budget and around 46% say that other project goals are met.

What these results show us is that project plans change in 59% cases and these changes then possibly affect how well the project goals are met when, e.g., delivering results is delayed and time goals are not met, according to the original project plan. It can be concluded that project managers regularly have to manage changes to their project plans which then results in the project not meeting the original project goals. Project management frameworks that view changes as exceptions and not as rule will be less efficient and even difficult to apply for project managers facing frequent changes. PRINCE2 methodology for example views changes as exceptions and has procedures to deal with them accordingly when on the other hand Agile methodology views changes as part of its basic process and is driven by it.

It is an interesting topic to research which project management methods of the ones available today are best suited to be used in different scenarios with different project types.

Statements on the impact on the customer (Survey question 18)

In 80% of the cases the project managers say that their project deliverables impact the customer in a positive way, increasing his or her performance and leaving the customer satisfied. In about 72% of the cases the customer comes back with further projects. The general notion here is that the customers seem to be rather satisfied with the deliverables, but these results are interesting when compared to results from research question 1, where only in 55% of the cases, the project managers say the impact of the deliverables on the customer is measured.

Statements on the impact on the project team (Survey question 19)

When asked about the project team, the answers provided are all rather positive. For example, 76% of the project managers say that their teams are satisfied and active in their projects. Also 72% say that individuals in their project teams experience personal growth and about 81% state that individuals in their project teams want to stay with the organization.

Statements on business and direct organizational success (Survey question 20)

This group of statements concerns business and organizational success in projects. The first thing that stands out in the results is how many project managers, 7 - 22%, say that the statements do not apply to their projects. When investigated further it is seen that the reason for this lies in the fields of the project mangers' projects. Two fields occur more

frequently than others; education being the first and the health sector with nursing and caretaking being the second.

About half of the project managers think that their projects have increased their organization's success but many think that their projects' business success objectives do not contribute to the organizational success. This view was common among project managers in the field of education, non-profit projects and other fields where financial prosperity is not the main objective or emphasis of the projects.

Just less than half of the project managers, or about 42-48%, say that their projects finish in most cases within time limits, within budget and meet other project goals although 60% say that their projects' plans are changed during execution. Around 80% think that their projects and deliverables increase their organizations capability and prosperity and about 76-81% think that their projects have a positive impact on the project team. Figure 21 summarizes these results.

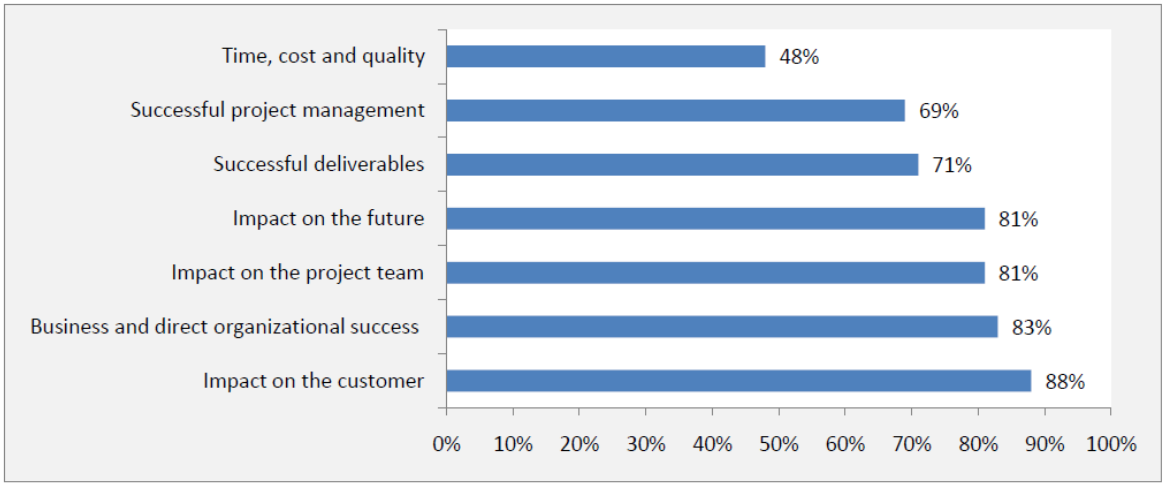

Figure 21: Success measured on different dimensions

The conclusion here is that although less than half of the project managers say their projects finish within defined goals, and do not meet the criteria, majority of the projects are successful and have a positive impact on the project team, the customer and the organization.

5.4 Answer to Research Question 3

Question:

Do project managers consider ethical factors in their projects and do they conduct ethical risk assessment?

Answer:

The short answer is yes.

According to the survey 91% of project managers have basic knowledge in ethical theory, thereof 87% men and 94% women.

Only about 31% of the project managers conduct ethical risk assessment in their projects. The age distribution here is interesting. Of the project managers that do conduct an ethical risk assessment, 4% are younger than 30, 26% are around 31-40 years old, 48% are around 41-50 years old and 22% are around 51-60 years old. According to this, project managers between 41 and 60 are more likely to assess ethical risk in their projects than younger project managers. Figure 22 displays this finding.

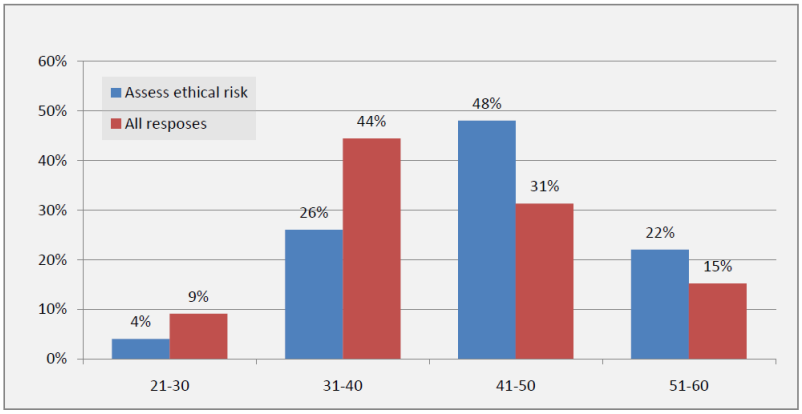

Figure 22: Ethical risk assessment usage distribution according to age

Although only 31% say they conduct ethical risk assessment, 79% say it should be standard practice in project planning. Around 53% say that ethical issues have come up in their projects. About 49% think they have the tools to properly evaluate ethical risks in projects and 70% say they would seek the opinion of a specialist in ethical theory if needed for their projects.

78% say that the project manager is responsible for conducting an ethical risk assessment and 70% think that the project owner is responsible for the same conduct.

From the above mentioned it is clear that less than one third of project managers evaluate ethical risk factors or ethical aspects of their projects before putting them into action. It can also be concluded from the answers that there is a need for an ethical risk assessment tool because only half of the project managers think they have the proper tools to conduct such an assessment. This is further discussed in next chapter.

5.5 Answer to Research Question 4

One of the main results to the questionnaire is that in about 68% of the cases, ethical risk or ethical factors are not evaluated. When asked, about 49% of the project managers said they did not have the necessary tools to evaluate ethical risks or ethical aspects of their projects but 95% thought that basic understanding of ethical concepts should be part of the project manager's skill-set.

Another important result is the way one treats ethical concepts and phrases questions on ethical matters in context with project management. The project managers' responses to some questions were largely neutral. This might indicate that project managers do not see a clear connection between happiness and their projects' success, while they connect pride and virtue to ethics as can be seen in Table 10.

As discussed in chapter 2.2 here above, ethics or morality can be viewed as having four basic components that fall into two basic categories, outcome-oriented ethics and process-oriented ethics. Outcome-oriented ethics focus on the product of one's actions or in the case of projects, on the moral of its deliverable, and poses questions like: "Will it give good results?" Process-oriented ethics focus on one's actions and questions such as: "Is it in accordance with principles that apply for all?" (Jónasson, 2008).

By practical application of virtue and utility ethics projects' deliverables can be evaluated in an ethical context. So far there has not been a good methodological way for project managers to do this and so it has been up to them to manage ethical risks by using existing knowledge and skills. The same goes for duty and rights ethics where the focus is on the process and actions rather than outcome.

The method proposed here for evaluating project's ethics is developed from answers from a questionnaire sent to 200 IPMA-certified project managers and the research work done prior to that.

5.5.1 The framework

The framework for evaluating project's ethical aspects will rely on the four formerly introduced principles of ethics at its foundation thus creating a tool for project managers with which they can evaluate their projects from the ethical perspective.

The framework consists of three dimensions of interest groups: *The project team*, *the customer* and *the society*. These dimensions are then combined with the basic factors of all projects: *resources, process* and *deliverable*s. Together these components of ethical principles, interest groups and project building blocks shape the ethical evaluation framework.

5.5.2 The interest groups

The choice of interest groups may seem arbitrary, when all the different kind of interest groups found in modern project management and project success theory are considered. The groups chosen represent those that are directly affected by the project and its run if the project is ethically challenged. The impact the project makes on these interest groups will in return affect the project owner and the organization in a negative or positive way. Negative impact on the customer will probably mean negative impact on the project and the organization. The impact on the interest groups differs with time, where the impact on the project team becomes apparent during the project's execution while the impact on the customer is more apparent when he or she has received the deliverable from the project.

Here the projects deliverable will impact the customer and possibly later the society. The society is defined as containing everything except the organization, the project team and the customer. This relationship of cause and effect is further explained in Figure 23 here below.

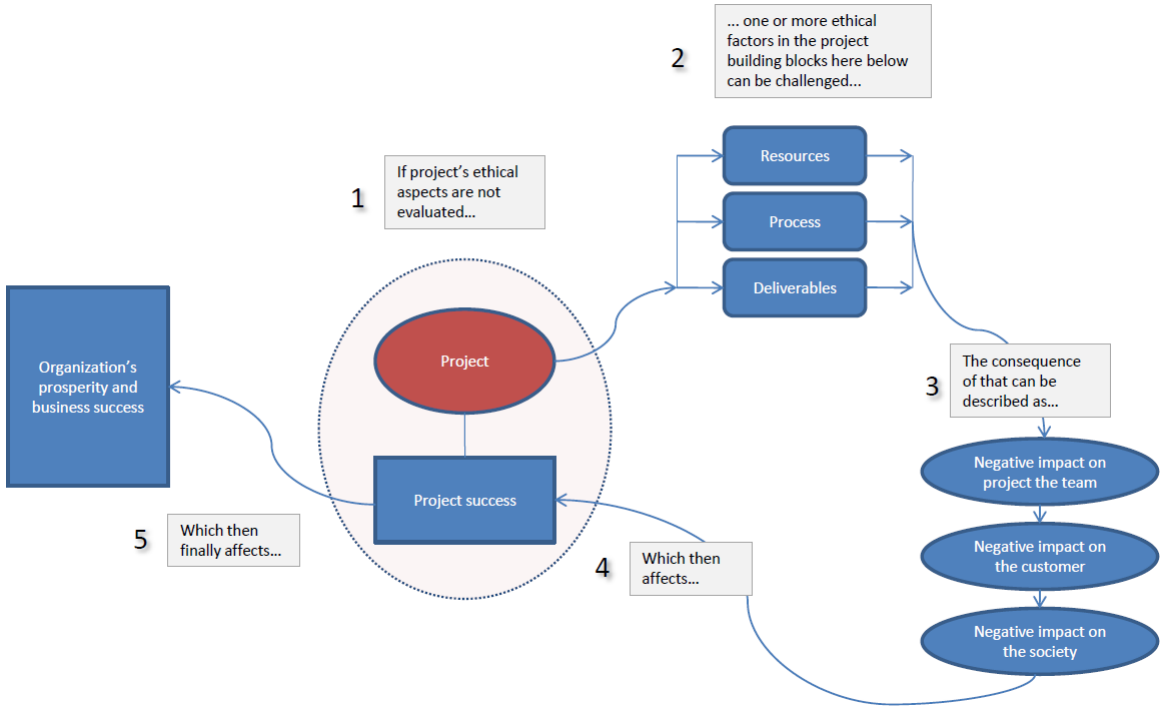

Figure 23: Cause and effect of ignoring ethical risk factors

One would ask: "What about the company, the project board or the project's owner?" In this paper it is presumed that when a new project is started, it is the will of the company and the project owners to start it so there should not be a negative attitude toward the project beforehand from the company. Another question that could be asked is: "Considering ethical standpoints, should we not, for example, include our environment as an interest group?" The answer here is yes and no. A bad project process can affect many different things around us, be it the project owner, the project team, the company, the customer, the market, the society with many different interest groups and then the environment. The difference between the environment and most of the other interest groups mentioned here is that if someone kicks the environment, it will not kick back so easily. The environment will not rally people in groups and protect itself from further excessive impact with any direct actions. The environment cannot raise its own voice or write an article in a newspaper and complain. It is rather the society, or groups within it, that reacts when the environment is under fire from different organization and act as its voice. So it will be society that represents the environment against organizations. In that sense the environment has a voice. The general idea here is that these interest groups can kick back with negative impact or cheer with positive impact, based on how they evaluate the ethical aspects of a certain project by a certain organization.

In fact any of the common interest groups can be represented in the model but in this presentation of the model, these groups are chosen based on their distance from the project, the project team being closest to the project, then the customer and finally the society,

further away. Figure 23 describes a simple scenario that can take place when possible ethical issues come up.

5.5.3 The building blocks of a project

The building blocks of most projects are resources, process and deliverables, and they represent the project life-cycle in a very general way but more importantly they represent the parts of a project that can be challenged, in this context, ethically.

By evaluating these building blocks the project manager is able to spot possible ethical risks or problems in a project and manage them properly before a problem arises that impacts the project success.

5.5.4 The ethical principles

The ethical principles in the framework are presented in the form of a list of questions about the project's resources, the project's process and the project's deliverable. The same principles were used as a foundation to the questionnaire.

The principles are used to ask ethical questions about the project which the project manager then has to contemplate and answer accordingly. The goal with the questions is to get the project manager to ask himself or herself ethical questions about the project and answer them. The statements are made as simple as possible so heavy ethical concepts do not reduce the usability of the framework. It is no realistic to presume that project managers in general have "good" knowledge of ethical concepts.

The reason these principles are used is because they focus both on one's actions, which are the process-oriented ethical theories and the outcome of that actions, which are the outcome-oriented ethical theories. Project management is exactly about action and outcome, execution and delivery.

5.5.5 The Evaluation Schema

The Evaluation Schema is made up with 3x3 arranged cells in a table, the *building blocks* on the lateral side of the table and the *interest groups* on the horizontal side.

The schema is a visualization tool for the results from the question list and is meant to help the project managers to summarize his or her results and make them easy to present. In the case an independent third party is also required to answer the questions, his or her results can then also be presented with the schema and compared to the results from the project manager. The schema is presented here below in Figure 24.

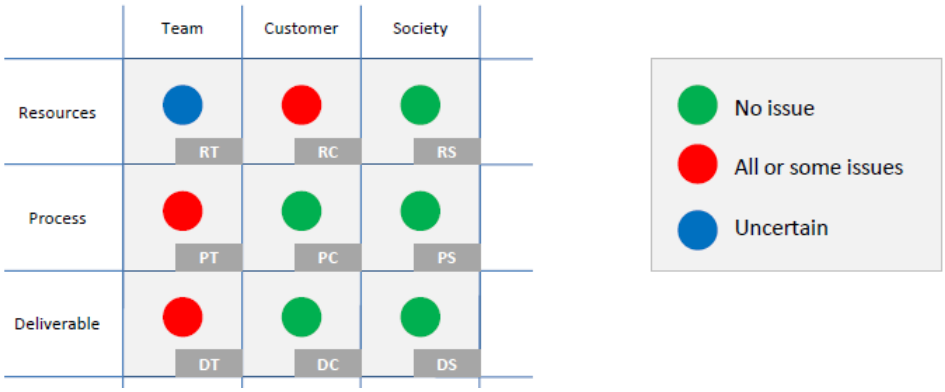

Figure 24: The Evaluation Schema

5.5.6 The Ethical Questions List

The Ethical Questions List ties together the interest groups, the ethical principles and the building blocks into a framework. The list contains three question groups, one for each building block. In each group there are four questions based on the ethical principles. The project manager answers each question for each one of the three interest groups. When all the questions in one question group have been answered for all the interest groups, the project manager completes it by marking the results according to the following rules.

- If all the answers in one column are "Yes", the project manager marks the result as "No issue".
- If there is one "No" for an answer in any column, then the project manager marks the result for that column as "Issue".
- If one or more answers are "Not sure" the project manager marks the results for that column as "Uncertain".

It only takes one "no" in the answers to raise an issue in each column so the only thing more than one "no" does is to make the issue possibly more critical. It is possible that the project manager has a bad feeling for some parts of his or her project beforehand. In such a case answering this list of questions should solidify that feeling or eradicate it. A shrunk version of the question list is displayed here below in Figure 25. A landscape version of the question list can be found in Appendix B.

	Resources	Project team	Customer	Society
1	Can you. with pride, tell your project team / customer / society about the resouces used in the project?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
2	Are you convinced that the resources used in the project will not cause suffering or anger to your project team / customer / society?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
3	Do you feel its your duty to inform your project team / customer / society about the resouces in the project if the question comes?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
4	Are you convinced that the resources used in the projectsare respectful of the rights of your project team / customer / society?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
	Result	Issue / Uncertain / No issue RT	Issue / Uncertain / No issue RC	Issue / Uncertain / No issue RS

	Process	Project team	Customer	Society
1	Can you, with pride, tell your project team / customer / society about the processes used in the project?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
2	Are you convinced that the processes used in the project will not cause suffering or anger to your project team / customer / society?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
3	Do you feel its your duty to inform your project team / customer / society about the processes in the project and their possible concequence if the question comes?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
4	Are you convinced that the processes used in the project are respectful of the rights of your project team / customer / society?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
	Result	Issue / Uncertain / No issue PT	Issue / Uncertain / No issue PC	Issue / Uncertain / No issue PS

	Deliverable	Project team	Customer	Society
1	Can you, with pride, tell your project team / customer / society about the properties of the project's deliverables?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
2	Are you convinced that the deliverable(s) will not cause suffering or anger to your project team / customer / society?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
3	Do you feel its your duty to inform your project team / customer / society about the properties of the project's deliverables and their possible consequence if the question comes?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
4	Are you convinced that the deliverables resulting from the project are respectful of the rights of your project team / customer / society?	Yes / No / No sure	Yes / No / No sure	Yes / No / No sure
	Result	Issue / Uncertain / No issue DT	Issue / Uncertain / No issue DC	Issue / Uncertain / No issue DS

Figure 25: The Ethical Questions List

When all the questions have been answered, the Evaluation Schema is used to summarize the results.

5.5.7 The method – how and when to use the framework

When a project manager has prepared a plan for an upcoming project, and before the plan is put into action, he or she should apply the framework. The results of the framework's application will highlight parts of the plan that may have ethical issues or have obvious ethical issues. This does not guarantee though that the project will not have ethical issues afterwards. The project manager can then use this information to re-evaluate the plan and thus try to minimize possible negative impact on the project later on. The project manager may choose to continue with the plan as it is but at least he or she is aware of the possible crisis the project might suffer. Simple instructions for using the framework are as follows:

1. First of all, a plan for the project must be well advanced if not completely ready. This is important so that new resources are not added or changes made to the project's processes and deliverables after being evaluated with the framework. If such changes are made the results of the framework are invalidated.

2. The project manager goes through the list of ethically oriented questions and answers them according to best conscience.

3. It is also important to have an independent third party evaluate the project plan with the framework, especially for high profile projects or projects in industries sensitive to ethical decisions and failures, the biochemical industry being a good example. The independent third party is asked to use the framework to evaluate a project plan the same way the project manager does and the two results are then compared.

4. When the list of questions has been completed, the project manager translates the answers onto an Evaluation Schema. The Evaluation Schema's purpose is to literally highlight the results from the list of questions and is useful for the project manager to better realize his or her results. The same way, if an independent third party evaluation has been requested, the schema is a convenient way to compare the different results.

The framework can also be used as an ethical quality control tool. Using it as such the project manager confirms the ethical aspects of the project. Using the framework with ethical risk management is also possible, because the framework asks critical questions about the project, and the answers to those questions can be used as an input into risk assessment methods. In risk management, risks are assessed and preemptive actions planned to minimize the potential risks. In comparison, the framework evaluates ethical aspects of a project view them as having no issue, not sure, or having an issue. Risk implies that something "might" happen but issue implies that something "is" and needs to be corrected.

5.5.8 The framework's value

The greatest value in using this framework is the introspection the project manager has to undertake to answer the questions truthfully. The questions require that the project manager evaluates different project parts from different perspectives; the perspective of the team, the customer and the society.

6 CONCLUSIONS

In this research the focus was put on success in project management and on ethical aspects of projects in context with success. To answer the questions posed in this thesis a survey was conducted among all IMPA certified project managers in Iceland. The survey brought a few interesting facts into the daylight. Project managers generally define project success criteria according to tradition, with time, cost and quality, but with less emphasis on customer satisfaction. This alone indicates that the project managers' focus has not moved far away from the simple execution of a project and is quite remarkable when the literature is reviewed because it is extensive and goes more than 50 years back. In the IT industry the success rate is very low (Wateridge, 1995) indicating two possible things; either the literature is not helping IT project managers in their projects or that project managers do not really utilize the tools available to them in the literature.

Less than half of the project managers in the research say that their project finished within time limits, within budget and met other project goals and more than half say that their project plans change during project execution. These results might indicate that many of the project managers are managing projects that have dynamic properties or great uncertainty. Dynamic property means that some aspect of the project is prone to changes, for example due to rapid changes in technology or markets. Construction projects are for example less prone to changes than IT projects because the technology used in construction projects is well developed and constant which is opposite to IT environment.

About half of the project managers think that their projects have increased their organization's success but many project managers do not think that their projects have business success objectives or contribute to the organizational success. The majority thinks that in most cases their projects' deliverables are successful in spite of poor results on the success criteria which mean that although time, cost and quality criteria fail and less than half try to measure the customer's satisfaction, the projects succeed. So although one or many of the criteria fail, the project is a success according to the project managers. It can be speculated that the criteria are defined in a preparation phase, but then the projects undergo alterations that the managers have to control. The outcome of the projects can be good in context with the changes made to the project but with the initial criteria. For project success it can thus be concluded that project managers are defining project goals and criteria for their projects but the results, according to the criteria, are failure in more than half of all cases. Their projects do frequently deviate from the initial project planning which means that the initially defined criteria come under pressure. Regardless of this, the projects are in most cases successful and make a positive impression on the customer, project team and organization.

When asked, the project managers said that they have sound knowledge of ethical theory and around half state that they have the necessary tools to evaluate ethical risks in their projects. Only one third conducts an ethical risk assessment, and the majority of that group is more experienced project managers. The majority of the group concurs that ethical risk assessment should be a standard practice when planning a project. They also say they would seek the opinion of a specialist in ethics if needed for their projects. According to the results from the literature reviewed in this research, there is no good way or good tool for project managers to measure ethical aspects of their projects. The fact that one third of all project managers actually perform an ethical risk assessment and that group is mostly experienced project managers allows us to assume that learning from experience is the key here. With experience, and specifically failures, project managers learn to evaluate all

aspects of their projects, including the ethical ones. As a conclusion the need for a tool to assist project managers to evaluate ethical aspects of their projects, and as a result, potential ethical issues and risks, seems to be apparent. The lack of tools and discussion about ethical perspectives in context with projects in the project management literature also confirms this point.

To fulfill the apparent need of a tool, a framework is presented in this thesis that builds on four important principles in ethical theory that focus on our actions and their results. With these principles as our guiding light the main components of all projects are evaluated in context with different interest groups that each has different proximity to the project. By using this framework, the project manager must introspectively contemplate and find answers regarding his project that may surprise her or him. Project managers may have a "bad feeling" for a project they are managing but cannot pinpoint it. The framework can help in this respect, if the feeling is of ethical origin, because the questions that are asked demand that the project is viewed from different ethical perspectives.

The hope is that this framework can assist project managers in better preparing their projects and make it possible for them to catch potential ethical issues that can impact their project's success.

The research and it´s results as a whole has input into the continuous development of project management, both regarding the traditional success criteria and also in respect to ethics in project management.

6.1 Suggestion for further work

There are few things here that demand further attention and can be valuable to look into. According to the conclusion on project success, project managers rather frequently deal with changes in their projects that impact their criteria. The criteria are defined to make it possible to measure project success. It may be interesting and useful to evaluate how much projects are changing in the execution phase and see how well different project management methods and frameworks are handling the changes. Projects with great uncertainty or frequent changes most probably need different handling than projects with low uncertainty and low rate of changes. Another question here could be: "Are project managers using suitable methods in their work or are they just using what they know and striving to adapt?"

To confirm the frameworks real usefulness, a series of case studies would have to be conducted and project managers asked to use it and evaluate it. The results should assist in further developing it.

Apart from this it can also be valuable to study and evaluate how many projects have truly failed because of ethical problems. There are very big examples of projects where good ethics or morality was totally absent, e.g., Enron.

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APPENDIX A: THE SURVEY

The survey was presented in three main parts; Questions for background variables, statements concerning project success and statements concerning project ethics. A letter was sent with the survey to properly advertise the project and to motivate the participants.

The solution used to present the survey is provided by www.surveymonkey.com and was easy to use, both in design and analysis. The author of this report highly recommends this solution.

The survey was presented in Icelandic, and as such, will also be presented that way here.

A letter to the participants

Kæru verkefnastjórar.

Ég vil þakka ykkur fyrir góð viðbrögð við könnuninni minni og alveg sérstaklega fyrir athugasemdir í lok hennar.

Ég vil endilega hvetja þá sem eftir eiga að svara könnuninni að taka slaginn og svara henni því það er mikilvægt fyrir mig að sem flestir svari svo niðurstöður verði sem áreiðanlegastar. Það tekur um það bil 10 -15 mínútur að svara könnuninni.

Slóðin á könnunina er :
http://www.surveymonkey.com/s.aspx?sm=a5R9etyE23DY4NhFRgLEcA_3d_3d

Fyrir þá sem eru að sjá þennan póst núna í fyrsta skipti þá fylgir kynning á könnuninni og verkefninu mínu hér að neðan.

Ef einhverjar spurningar vakna eða ef eitthvað er óljóst, ekki hika við að senda mér póst á: fjalars@hi.is

Með fyrirfram þökk fyrir þátttökuna,

Fjalar

_____
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Survey introduction

Könnuninni er skipt í þrennt.

Fyrst hlutinn inniheldur **14** bakgrunnsspurningar sem notaðar eru sem greiningarbreytur í úrvinnslu niðurstaðna. Annar hlutinn inniheldur **8** hópa fullyrðinga um árangursþætti í verkefnastjórnun. Þriðji hluti könnunarinnar inniheldur svo **5** hópa fullyrðinga um siðfræði

tengda verkefnum.

Helstu niðurstöður rannsóknarinnar munu væntanlega verða birtar á greinaformi og verður greinin send öllum þátttakendum í könnuninni.

Reiknað er með að ekki taki meira en **15** mínútur að svara könnuninni.

Fullrar nafnleyndar er gætt í könnuninni og eru öll svör meðhöndluð sem trúnaðarmál. Ef einhverjar spurningar koma upp hafið samband við Fjalar, fjalars@hi.is eða í síma 868-4055.

Með von um jákvæð og skjót viðbrögð!

Sigurður Fjalar Sigurðarson
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Background questions

All questions in this section are closed, except for the possibility of entering "other" answers in some of them, if the categorization does not cover all possibilities.

1. Kyn?

- Karl
- Kona

2. Aldur?

- Yngri en 20 ára
- 21-30 ára
- 31-40 ára
- 41-50 ára
- 51-60 ára
- Eldri en 60 ára

3. Hvaða grunnnám á háskólastigi hefur þú lokið?

- Hjúkrunarfræði
- Lyfjafræði
- Matvælafræði
- Sjúkraþjálfun
- Tæknifræði

- Tölvunarfræði
- Uppeldis- og menntunarfræði
- Verkfræði
- Viðskiptafræði
- Hef ekki lokið grunnámi á háskólastigi
- Annað...

4. Hvaða framhaldsnámi á háskólastigi hefur þú lokið?

- Hjúkrunarfræði
- Lyfjafræði
- Master in Project Management (MPM)
- Matvælafræði
- Sjúkraþjálfun
- Tölvunarfræði
- Uppeldis- og menntunarfræði
- Verkfræði
- Viðskiptafræði
- Hef ekki lokið framhaldsnámi á háskólastigi...
- Annað...

5. Hverja af eftirtöldum vottunum hefur þú lokið hjá Verkefnastjórnunarfélagi Íslands?

Miðað er við alþjóðlega IPMA vottun. Veldu þá vottun sem þú tókst síðast.

- D vottun
- C vottun
- B vottun
- A vottun
- Hef ekki lokið neinni vottun…

6. Hverjar af eftirtöldum hugtakagrunnum og aðferðum hefurðu kynnt þér?

- PRINCE2
- AGILE
- SCRUM
- PMBOK
- ICB

- Hef ekki kynnt mér neitt af ofantöldu

7. Hvað af eftirtöldu hefurðu kynnt þér eða setið námskeið í?

- Stefnumiðað árangursmat (e. Balanced Scorecard)
- EFQM Afburðarlíkanið (e. EFQM Excellence Model)
- Virðisstjórnun og EVA (e. Value Based Management & EVA)
- Hagnýt viðmið (e. Benchmarking)
- Ferlastjórnun (e. Business Process Management)
- Sex Sigma Straumlínustjórnun (e. Lean Six Sigma)
- ISO 9001
- Hef ekki kynnt mér neitt af ofantöldu...

8. Hvað hefur þú unnið mörg ár í verkefnastjórnun?

Veljið þann möguleika sem á best við

- Minna en 1 ár
- 1-5 ár
- 6-10 ár
- 11-20 ár
- 21-30 ár
- 31-40 ár
- Meira en 41 ár

9. Á hvaða sviði starfar þín skipulagsheild/fyrirtæki?

Veljið þann möguleika sem á best við

- Afþreyingar- og ferðamannaiðnaður
- Byggingaiðnaður
- Efna-, lyfja- og líftækniiðnaður
- Fjarskipti
- Framleiðsluiðnaður
- Fjármálaiðnaður
- Heilbrigðisþjónusta
- Innflutningur og sala á varningi
- Landbúnaður
- Málmvinnsla
- Matvælaiðnaður
- Menntun og fræðsla
- Orkuiðnaður

- Sjávarútvegur
- Upplýsingatækni
- Á öðru sviði en ofantalið...

10. Hvaða markaði þjónar þín skipulagsheild/fyrirtæki?

Veljið einn eða fleiri möguleika sem eiga best við

- Almennum markaði
- Iðnaðarfyrirtækjum
- Ríkisreknum fyrirtækjum

11. Hvernig verkefni eru unnin hjá þinni skipulagsheild/fyrirtæki?

Veljið einn eða fleiri möguleika sem eiga best við

- Rannsóknar- og þróunarverkefni
- Rekstrar- og viðhaldsverkefni
- Uppbygginga- og framleiðsluverkefni
- Annað...

12. Hversu mikið tæknilegt flækjustig er í þeim verkefnum sem þú stýrir?

Veljið þann möguleika sem á best við

- Ekki tæknilegt verkefni
- Tæknin er vel þekkt og góð reynsla komin á hana
- Tæknin byggir bæði á vel þekktum einingum sem og nýjungum
- Mest af tækninni er ný tækni sem ekki hefur fengist reynsla á
- Tæknin er ný og óprófuð eða ennþá í þróun

13. Hvað, að jafnaði, hafa verkefnin sem þú hefur stýrt verið stór (í mannmánuðum talið. 1 mánuður = 160 klst.)?

Veljið þann möguleika sem á best við

- Minna en 1 mánuður
- 1-2 mánuðir
- 3-5 mánuðir
- 6-11 mánuðir
- 12-24 mánuðir (1-2 ár)
- 25-48 mánuðir (2-4 ár)
- 49-96 mánuðir (4-8 ár)

14. Hversu mikið nýtirðu þér þekkingu þína af verkefnastjórnun?

Veljið þann möguleika sem á best við

- Þekkingin hefur nýst mér mjög lítið
- Ég hef þekkinguna til hliðsjónar
- Ég nýti mér aðferðir og hugmyndafræði að hluta til eins og hentar
- Ég reyni að fylgja aðferðum og hugmyndafræði eins vel og ég get

Project success statements

All questions in this section are closed questions.

15. Almennar fullyrðingar um viðhorf

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Tengsl milli árangursmælikvarða og áhættuþátta eru óveruleg
- Siðferðisvitund verkefnisstjórans hefur mikið vægi í árangri verkefnis
- Það er mikilvægt að meta gæði / áreiðanleika verkefnisáætlunar áður en hún fer í framkvæmd
- Það er erfitt að meta gæði / áreiðanleika verkefnisáætlunar
- Ég hef góða þekkingu á hugtökum verkefnastjórnunar
- Í minni skipulagsheild/fyrirtæki er unnið eftir staðlaðri verkefnastjórnun og verkefnastjórnunarferlum

16. Fullyrðingar um framkvæmd verkefna

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Verkefnisáætlun er útbúin fyrir öll verkefni sem ég stýri og kem að
- Verkefnisáætlun er alltaf rýnd áður en framkvæmd hefst í þeim verkefnum sem ég stýri
- Mælanleg markmið fyrir tíma eru ávallt skilgreind í þeim verkefnum sem ég stýri
- Mælanleg markmið fyrir kostnað eru ávallt skilgreind í þeim verkefnum sem ég stýri
- Mælanleg markmið fyrir gæði/eiginleika eru ávallt skilgreind í þeim verkefnum sem ég stýri
- Mælanleg markmið fyrir ánægju viðskiptavinar eru ávallt skilgreind í þeim verkefnum sem ég stýri

17. Fullyrðingar um árangur verkefna

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Mín verkefni klárast nánast alltaf á tímaáætlun.
- Mín verkefni standast nánast alltaf kostnaðaráætlun.
- Mín verkefni taka venjulega litlum sem engum breytingum á framkvæmdartíma sínum.
- Aðrir árangursþættir, sem skilgreindir hafa verið í mínum verkefnum, standast yfirleitt alltaf.

18. Fullyrðing um áhrif á verkkaupa/viðskiptavin

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Afurðir minna verkefna bæta nánast alltaf hag verkkaupa.
- Verkkaupar eru nánast alltaf ánægðir með afurðir minna verkefna.
- Afurðir minna verkefna uppfylla nánast alltaf kröfur verkkaupa.
- Verkkaupar nota afurðir verkefna minna.
- Verkkaupar biðja nánast alltaf um frekari vinnu frá minni skipulagsheild/fyrirtæki.

19. Fullyrðingar um áhrif á verkefnisteymið

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Mitt verkefnisteymi er ávallt ánægt og virkt í sínum verkefnum.
- Mitt verkefnisteymi er ávallt tryggt í sínum verkefnum.
- Mitt verkefnisteymi býr ávallt yfir mikilli orku og góðum liðsanda.
- Mínu verkefnisteymi finnst ávallt gaman að vinna að sínum verkefnum.
- Einstaklingum í mínu verkefnisteymi finnst þeir eflast í gegnum sín verkefni.
- Einstaklingar í mínu verkefnisteymi vilja ávallt halda áfram að vinna fyrir mína skipulagsheild/fyrirtæki.

20. Fullyrðingar um viðskiptalega velgengni og áhrif á skipulagsheildina/fyrirtækið

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Mín verkefni leiða oftast af sér fjárhagslegan ábata fyrir mína skipulagsheild/fyrirtæki.
- Mín verkefni auka alltaf hagnað minnar skipulagsheildar/fyrirtækis.
- Mín verkefni skila minni skipulagsheild/fyrirtæki alltaf arði.
- Mín verkefni skila minni skipulagsheild/fyrirtæki oftast aukinni markaðshlutdeild.

- Mín verkefni auka alltaf hag hluthafa minnar skipulagsheildar/fyrirtækis.
- Mín verkefni auka alltaf árangur minnar skipulagsheildar/fyrirtækis.

21. Fullyrðingar um áhrif á framtíðina

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Afurðir minna verkefna hafa oftast alla burði til hvetja til frekari verkefna.
- Mín verkefni leiða oftast af sér enn önnur verkefni og nýjar afurðir.
- Mín verkefni hjálpa oftast til við að opna nýja markaði.
- Mín verkefni skapa oftast nýja tækni sem nýtist til framtíðar.
- Mín verkefni gefa oftast af sér nýja viðskiptaferla.
- Afurðir minna verkefna leiða oftast af sér ný verkefni og nýjar afurðir.

22. Fullyrðingar um heildar árangur

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Verkefnastjórnun í mínum verkefnum gengur alltaf vel
- Afurðir minna verkefna bera alltaf mikinn árangur

Project ethics statements

All but the last question here are closed questions.

23. Fullyrðingar um siðferði í verkefnastjórnun - Almennt

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Samræða um siðferðileg álitamál á sér stað í verkefnum mínum
- Siðferðileg álitamál vakna í þeim verkefnum sem ég stýri
- Þekking á siðfræði á að vera einn af færnisþáttum verkefnastjóra
- Ég hef fengið tilsögn í siðfræði
- Það er á ábyrgð verkefnastjórans að framkvæma siðferðilegt áhættumat
- Það er á ábyrgð verkefniseigandans að framkvæma siðferðilegt áhættumat
- Áhættugreining er alltaf framkvæmd í mínum verkefnum
- Áhættugreining m.t.t. siðferðilegra þátta er framkvæmd í mínum verkefnum.
- Siðferðileg áhættugreining á að eiga sér stað í verkefnum
- Verkefnastjórinn ber ábyrgð á fjárreiðum og fjármálum verkefnisins
- Verkefnastjórinn ber ábyrgð á persónulegri velferð einstaklinga í verkefnateyminu
- Verkefnastjóri á að búa yfir þekkingu á siðfræðikenningum til að grundvalla ákvarðanatöku sína á.
- Samfélagið í heild þarf að vera sátt við afurð og afleiðingar verkefnisins
- Mörg verkefni sem þarf að vinna koma niður á réttindum fólks
- Ég bý yfir öllum nauðsynlegum tækjum og tólum til að meta siðræna áhættu í verkefnum
- Ég gæti hugsað mér að leita til sérfræðinga á sviði siðfræði til að fá úrskurð um siðferðileg álitamál í verkefnum

24. Fullyrðingar um siðferði í verkefnastjórnun - Dyggðarhyggjan

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Árangursrík verkefni eru verkefni sem ég geti verið sáttur við eftir að þeim er lokið
- Árangursrík verkefni eru verkefni sem að skapa meiri farsæld fyrir fleiri en færri
- Ég get stolt(ur) sagt ættingjum mínu og afkomendum frá vinnu minni í öllum verkefnum mínum
- Ég get stolt(ur) sagt ættingjum mínu og afkomendum frá framkvæmd allra verkefna minna
- Ég get stolt(ur) sagt ættingjum mínu og afkomendum frá afurðum og afleiðingu allra verkefna minna
- Dyggðugur verkefnastjóri er sá sem gerir það sem honum er sagt að gera
- Verkefni mín miða öll að því að auka ánægu og vellíðan

25. Fullyrðingar um siðferði í verkefnastjórnun - Nytjahyggjan

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Það er aðeins rétt að ráðast í verkefni ef það eykur samansafnaða hamingju hagsmunaaðila
- Öll mín verkefni hafa aukið hamingju míns verkefnateymis
- Öll mín verkefni hafa aukið hamingju minnar skipulagsheildar/fyrirtækis
- Öll mín verkefni hafa aukið hamingju verkkaupanna
- Öll mín verkefni hafa aukið hamingju samfélagsins
- Ég vel og framkvæmi verkefni mín með þeim hætti að þau muni skapa sem mesta hamingju fyrir sem flesta

26. Fullyrðingar um siðferði í verkefnastjórnun - Skylduboð

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Ég ræðst aðeins í verkefni sem ég myndi vilja að allir aðrir í samskonar aðstæðum ættu að ráðast í
- Sem verkefnastjóri er ég skuldbundinn verkefnisteymi mínu
- Sem verkefnastjóri er ég skuldbundinn minni skipulagsheild/fyrirtæki
- Sem verkefnastjóri er ég skuldbundinn verkkaupanum
- Sem verkefnastjóri er ég skuldbundinn samfélaginu
- Skyldur mínar gagnvart skipulagsheildinni/fyrirtækinu koma framar skyldum mínum gagnvart verkkaupanum
- Skyldur mínar gagnvart skipulagsheildinni/fyrirtækinu koma framar skyldum mínum gagnvart samfélaginu

- Allar athafnir mínar sem verkefnastjóra geta verið algild fyrirmynd fyrir alla aðra verkefnastjóra

27. Fullyrðingar um siðferði í verkefnastjórnun - Réttindi

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Allir hafa sömu réttindi
- Ég vinn öll verkefni mín á grundvelli þeirrar hugmyndar að allir menn hafi jafnan rétt
- Ég hef þegið réttindi mín til að vera verkefnastjóri af samfélaginu
- Það eru réttindi teymisins að ég verji rétt þess
- Það eru réttindi stjórnskipulagsins/fyrirtækisins að ég verji rétt þess
- Það eru réttindi verkkaupans að ég verji rétt hans
- Það eru réttindi samfélagsins að ég verji rétt þess
- Réttindi stjórnskipulagsins/fyrirtækisins eru framar réttindum viðskiptavinarins
- Réttindi stjórnskipulagsins/fyrirtækisins eru framar réttindum samfélagsins

28. Tvær fullyrðingar um könnunina

Mjög ósammála / Frekar ósammála / Hlutlaus / Frekar sammála / Mjög sammála /Á ekki við

- Könnunin var of löng
- Könnunin var of flókin

29. Vinsamlegast lýstu í örfáum orðum hvað þér fannst um könnunina

[opin spurning]

APPENDIX B: THE ETHICAL QUESTION LIST

Here is a landscape version of the Ethical Question List for easier viewing.

Resources		Project team		Customer		Society	
1	Can you, with pride, tell your project team / customer / society about the resouces used in the project?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
2	Are you convinced that the resources used in the project will not cause suffering or anger to your project team / customer / society?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
3	Do you feel its your duty to inform your project team / customer / society about the resouces in the project if the question comes?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
4	Are you convinced that the resources used in the projectsare respectful of the rights of your project team / customer / society?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
	Result	Yes / No / No sure	RT	Yes / No / No sure	RC	Yes / No / No sure	RS

Process		Project team		Customer		Society	
1	Can you, with pride, tell your project team / customer / society about the processes used in the project?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
2	Are you convinced that the processes used in the project will not cause suffering or anger to your project team / customer / society?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
3	Do you feel its your duty to inform your project team / customer / society about the processes in the project and their possible concequence if the question comes?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
4	Are you convinced that the processes used in the project are respectful of the rights of your project team / customer / society?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
	Result	Yes / No / No sure	PT	Yes / No / No sure	PC	Yes / No / No sure	PS

Deliverable		Project team		Customer		Society	
1	Can you, with pride, tell your project team / customer / society about the properties of the project's deliverables?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
2	Are you convinced that the deliverable(s) will not cause suffering or anger to your project team / customer / society?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
3	Do you feel its your duty to inform your project team / customer / society about the properties of the project's deliverables and their possible consequence if the question comes?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
4	Are you convinced that the deliverables resulting from the project are respectful of the rights of your project team / customer / society?	Yes / No / No sure		Yes / No / No sure		Yes / No / No sure	
	Result	Yes / No / No sure	DT	Yes / No / No sure	DC	Yes / No / No sure	DS