

Different project, different leadership

A research study on the impact of the relationship between leadership style and success of implementation, regarding IT projects

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Preface

This research is the completion of my Master study Strategy and Organization at the Open University Nederland. The chosen subject is to research if different projects need different leadership styles to gain the best result at implementation.

Writing this kind of research is not an easy job. I am very happy that this course has been coming to the finish. Scientific research is contains more than I could contemplate at the beginning of the course.

Many people supported me in different ways. I will thank all the friends and family who encouraged me for finishing this research and the study. I want also thank Rob Blomme for his enthusiasm, his useful counsel and motivating actions to come to this result what is in front of you.

Finally I thank my wife and 2 children for keeping the believe in me and in a good result. Without their support, I would never be able to do the complete study and specific the research.

Johan Rijksen
Maartensdijk, June 2010

Abstract

The subject of this study is to investigate the relationship between leadership style what is used in IT projects by project managers and the success of implementation. In the literature different approaches are described, with the difference in leadership of the project manager and his/her leadership style. Project success is in these researches and reviews are mostly defined in terms of managing the stakeholders (Wateridge, 1995), level of collaboration between the project manager and project owner, level of project structure (Müller, 2003) or delivering a project in time and costs (e.g. Redmill (1990), Wallace (1990)). Although these are valid arguments, in this research the accent is on the relation between leadership style (Transactional, Charismatic, Autocratic and Passive) and the success of implementation (Personal or User/customer) regarding different types of IT project (Size, Complexity and Strategic importance). The research study was conducted amongst 81 people who are part of the target group. Most of the heard persons were project members, the other respondents were end users and managers. The results show that there is a positive relationship between a charismatic leadership style and success of implementation. According to this research, there is a negative relation between autocratic leadership and success of implementation from the user/customer. Generally it can be said that most kinds of IT projects are best managed by a project manager with a charismatic leadership style. Considering the limitations of this study, we suggest that future investigation can be aimed if the most effective leadership in the Netherlands probably is a combination of participative and charismatic leadership, because in the Netherlands there is a small power distance between different management levels.

Keywords

Leadership style, project success, project manager, IT projects

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1. Introduction

In this chapter there is a survey of research what is done by other scientists about projects, leadership style and success of implementation. Based on these researches I did my investigation if there is a relationship between leadership style and success of implementation, moderated by different kind of types of projects, specific for IT projects.

There is a growing recognition that different types of projects demand different approaches to their management, requiring management procedures tailored to the needs of the project (Crawford *et al.*, 2005) and project managers selected with appropriate competencies (Turner and Müller, 2006; Müller and Turner, 2007). Projects occur in all shapes and sizes, from the small and straight-forward to extremely large and highly complex ones. Project management can be concerned with anything: people, products, services, materials, production, IT and communications, plant and equipment, storage, distribution, logistics, buildings and premises, staffing and management, finance, administration, acquisition, divestment, purchasing, sales, selling, marketing, human resources, training, culture, customer service and relations, quality, health and safety, legal, technical and scientific, new product development, new business development; and in any combination.

Many authors researched already the field of leadership and published articles and books. Müller and Turner (2007) researched "The Influence of Project Managers on Project Success Criteria and Project Success by Type of Project", where they explore differences by types of project, industry, or demographic profile of the project manager. They found there are few differences in relevant success criteria for projects or the performance of projects against success criteria, and few differences in the focus of project managers or their performance against the criteria. The research was responded by project managers where 43% worked in a technical job role, 18% general management and remaining part in other kind of industry.

Munns and Bjeirmi (1996) wrote a paper in which they distinguish the difference between project and project management. A good project management not automatically results in a successful project and vice versa. A project can be considered to be the achievement of a specific objective, which involves a series of activities and tasks which consume resources. Project management can be defines as the process of controlling the achievement of the project objectives. The objectives of both project management and the project are different and the control of time, cost and progress, which are often the project management objectives, should not be confused with measuring project success.

The project management literature agrees that there are two components of project success (Judgev and Müller, 2005; Morris and Hough, 1987; Wateridge, 1998, Turner, 1999), project success factors (elements of a project that can be influenced to increase

the likelihood of success) and project success criteria (the measures by which we judge the successful outcome of a project). What is acceptable in one project without impact on perceived success (for instance delay) is abject failure in another project.

The ambition of this research is to examine if there is a relationship between leadership style and success of implementation, moderated by different kind of types of projects, specific for IT projects. If there is a relationship, organizations have to think about which project leader having which leadership style has to manage what kind of project. When there is a relationship, you can say it differs.

This research has been divided in the next chapters: This chapter is about the results other researchers found out on leadership style, projects en success of implementation, chapter 2 describes the analysis, conceptual model and hypotheses. Chapter 3 is a description of the method (sample, research method, measures and correlation analysis), chapter 4 are the results. Chapter 5 is the conclusions and reflection. The research is finished by the references and appendices.

2. Literature

2.1 Leadership style

M.Thite (1999) did an empirical research aimed at identifying successful leadership styles for managers of Information Technology/Systems projects. While analysing the critical success factors of IT projects, the researchers are increasingly realising that non-technical factors, such as managerial, organisational and cultural issues, play a crucial role in determining the success otherwise of a project. Leadership is critical to any group environment. It is generally recognised that technical/scientific employees lack leadership skills to effectively manage people. The research of Thite was to examine, by an empirical way, the nature and importance of leadership in IT project management and explore the leadership characteristics of successful project managers. Thite determines 3 kinds of leadership, the transactional, transformational and technical leadership. Transactional leadership, which arguably represents the previous theory of leadership, focuses attention on the contractual agreement between the leader and the subordinate on expected performance in return for certain rewards. The proponents of transformational leadership, such as Bass (1985) argue that today's environment demands that subordinates perform beyond ordinary expectations and that is deliverable only by transformational leadership. While there are many theories on transformational leadership, Bass and Avolio's 'full range of leadership model' stands out as it clearly identifies different components of transformational and transactional leadership, provides a well-tested measurement instrument, and has produced an impressive array of findings across a wide variety of organizations, cultures and levels within organisations.

The study cleared that, in line with Bass and Avolio's model, transactional leadership alone, would lead to low project success, it needs to be augmented with transformational leadership to high project success. However, to make the model more situations specific to technical projects, a separate technical leadership scale was derived and tested along with transformational leadership with the hypothesis that a combination of transformational and technical leadership style would lead to high project success. The results show that the subordinates of the more successful projects rated their managers higher on the technical leadership scale, followed by transformational scale and transactional. The mean ratings suggest that in terms of leadership styles successful managers exhibit more of transformational and technical leadership than transactional leadership in line with Bass and Avolio's model.

R.J. House (1971) determines 4 different styles of leadership, in his Path-Goal Theory. The theory holds that a leader can affect performance, satisfaction and motivation of a group by:

- Offering rewards for achieving performance goals,

- Clarifying paths towards these goals,
- Removing obstacles to performance.

However, whether leadership behaviour can do so effectively also depends on situational factors. These situational factors consist of subordinates' personality and characteristics of the environment. With subordinates personality is meant the locus of control (a participative leader is suitable for subordinates with internal locus of control, a directive leader is suitable for subordinates with external locus of control). With the characteristics of the environment is meant: when a group is working on a task that has a high structure, directive leadership is redundant and less effective, when a highly formal authority system is in place, directive leadership can again reduce workers' satisfaction and when subordinates are in a team environment offering great social support, the supportive leadership style becomes less necessary.

According to House, there are four different types of leadership styles depending on the situation.

1. Directive leadership. The leader gives specific guidance of performance to subordinates.
2. Supportive leadership. The leader is friendly and shows concern for the subordinates.
3. Participative leadership. The leader consults with subordinates and considers their suggestions.
4. Achievement-oriented leadership. The leader sets high goals and expects subordinates to have high-level performance.

The essence of the theory is the meta proposition that leaders, to be effective, engage in behaviours that complement subordinates' environments and abilities in a manner that compensates for deficiencies and is instrumental to subordinate satisfaction and individual and work unit performance. This meta proposition, and the specific propositions derived from it, are consistent with, and integrate, the predictions of current extant theories of leadership.

Kræmmergaard and Rose (2002) denominate the difference between competencies, knowledge and skills. Knowledge is information stored and interpreted in the human mind (Weick, 1979). Skills are based on knowledge obtained through experiences. Competence is, according to Dreier (2000), the ability to transform knowledge and skills into practice in a qualified way. Managerial competence involves three elements: knowledge, skill and the ability to refine them in practice.

Kræmmergaard and Rose (2002) conclude in their research that personal competences,

such as leadership, communication and human resource underpin the whole journey. Business competences are more strongly required at the beginning and the end of the cycle and technical competences more strongly required in the middle phase.

While analysing the critical success factors of IT projects, the researchers are increasingly realising that non-technical factors, such as managerial, organisational and cultural issues, play a crucial role in determining the success or otherwise of a project. Leadership is critical to any group environment.

It is obvious that an IT project always occurs in a technical environment. However, technical leadership only is not enough for project success. In this way it is good to realize that there is a difference in types of projects. The range starts at "very easy" to "complex". "Very easy" means that the scope is small and no strategic impact and "complex" means large scope and high strategic impact. In the first category it is possible with mainly technical knowledge to lead the project and end with success. The competences this project leader possesses are such as high need for autonomy, achievement orientation, first loyalty to profession and second to organisation, craftsmanship approach and project orientation. These people are often found to be lacking in interpersonal and leadership skills either because the framework of their speciality leads to narrow viewpoints/blind spots or for lack of adequate role models.

Technical leaders concentrate on three major areas: Understanding the problem, managing the flow of ideas, and maintaining quality (Weinberg, 1986). Rosenbaum's research (1991) on successful technical leaders revealed that they coach for peak performance, manage organisational interference, orchestrate professional development of subordinates, expand individual productivity through team work and facilitate self management.

The IT project management literature in recent times has stressed the importance of leadership as a critical success factor (Pulk (1990), Cleland (1995)). The concept of hybrid managers, combining technical, managerial and business skills is increasingly gaining prominence (Palmer et al., 1990).

Current leadership literature makes a distinction between transactional leadership and transformational or charismatic or visionary leadership. Transactional leadership, which arguably represents the previous theories on leadership, focuses attention on the contractual agreement between the leader and the subordinate on expected performance in return for certain rewards. It is a cost-benefit exchange process leading to ordinary outcomes. The proponents of transformational leadership, such as Bass (1985) argue that today's environment demands that subordinates perform beyond ordinary expectations and that is deliverable only by transformational leadership. While there are many theories on transformational leadership, Bass and Avolio's 'full range of leadership

model' (1990) stands out as it clearly identifies different components of transformational and transactional leadership, provides a well-tested measurement instrument, and has produced an impressive array of findings across a wide variety of organisations, cultures and levels within organisations.

The critics on the MLQ of Bass and Avolio (1985 and 1993) and other questionnaires (Yukl (1999), Hunt (1999)) are that the effect of empowerment what is important for understanding of influence processes for charismatic leadership, seems to be under represented. The mentioned questionnaires also have too less attention for the positive aspects of transactional leadership. Both aspects tend to assign all found positive aspects to transformational leadership. This is not correct, because a part of these affects are coming from non-measured aspects of transactional leadership.

For these reasons, a new questionnaire was edit by De Hoogh, Koopman and Den Hartog (2004). They developed the CLIO: Een vragenlijst voor charismatisch leiderschap in organisaties.

In the first time, the CLIO focuses on charismatic and empowerment-based leadership (the leader has personal attention for his or her (project) associates and stimulates for taking initiatives and responsibility). On the second place the CLIO measures also the autocratic, transactional and passive leadership.

Transactional leadership is limited to contractual obligations, based on a costs and benefits relation. Characteristics of this type of relationship are that employees get benefits when acted correct what was ordered, the relationship has no higher or longer term goal, determining aims and adjusting employees ('maintenance leadership' (Den Hartogh, 1997)). This form is useful in situations where no (big) changes are happening.

Transformational leadership is more than a costs-and-benefits-switch relationship. It also contents motivate and inspire employees to perform more than the average. The theory of this kind of leadership is an emotional connection between the employees and their organization (House, 1988). By creating the need for change, introducing a new vision and impassionate people for this vision, this kind of leaders are able to change the organization. According to Bass (1985) the change can be achieved by making the employees aware from the need and value of the goals, because of the employee's think of the benefit for the organization. This type of leadership is useful in projects with a high complexity.

Autocratic leadership is focused on enlarging the dominant position of the leader and confirming the dependency of the employees (Block, 1987; Conger & Kanungo, 1988). This kind of leadership is sometimes seen as arrogant and not-democratic. This type of leadership is useful in projects under high pressure (e.g. time and money), with clearly defined objectives.

Passive leadership is equivalent for management-by-exception. The leader only intervenes when the goals are not becoming achieved. This form of leadership is useful in situations when the team consist of experts, who are familiar with the problem.

In this research the variety of leadership style is subdivided in passive, autocratic, transactional and charismatic.

The leadership style questions in the questionnaire are derived from the CLIO questionnaire (Hoogh, Den Hartog & Koopman (2004).

2.2 Projects

The primary reason for all projects, whether of an IT nature or of a more traditional type, is to achieve change of some sort. IT projects are, perhaps, the most radical change agents in an organization – they affect not only the tasks that people carry out, and their working conditions, but also will almost certainly affect the way the organization operates, its culture and its behaviour. The impact of the major IT project is all-pervasive in organizations.

Research by Crawford *et al.* (2005) identified an extensive list of features used for categorizing projects, and realized that the potential list was without end. They suggested using common models of categorization systems. They summarize the list of features in six categories because they believe they can be treated as independent. These categories are: application area, complexity, life-cycle, importance, culture and strategic importance. In these categories a project type can be placed. See table 1.

Table 1 Project Categorizations Used

Project attributes	Project types
Application area	engineering and construction, ICT, or organizational change
Complexity	high, medium or low
Strategic importance	mandatory, repositioning, renewal
Contract type	fixed price, remeasurement, or alliance
Life-cycle stage	feasibility, design, execution, close-out, commissioning
Culture	Project manager in single culture, host culture, or expatriate

Crawford and Pollack (2003) notice in their research the terms 'hard' and 'soft' projects. Generally, objectivist, scientific approaches are hard, while subjectivist, social approaches are soft (Martin, 2000). The hard paradigm promotes an understanding of the world as an objective reality, to which all people have an equal and unvarying access. Systems are mechanistic processes, with stable, or predictably varying, relationships between the relevant variables (Wilson, 1999). Interpretivism is central to the soft paradigm, drawing on ideas from phenomenology and hermeneutics (Midgley, 2000).

It is obvious that, no matter if it's a complex project or not, the project success will increase by the more clear the goals are, the better the objectives are described and negotiated by the key-players. Not all projects have their goals and methods defined so clearly. This is particularly so of IT projects and has led to dissatisfaction among many stakeholders with the outcome of many IT projects. Not only is there the problem of conflicting targets (time and budget versus quality and purpose), but also there is the further issue of meeting users requirements and specification (Wateridge, 1999).

The questions, used in this investigation on the subject Project type are partly used from the investigation of Müller and Turner (2007), who used it from Crawford *et al.* (2005). Müller and Turner validated the model in their studies in 2006 and 2007. Westerveld (2003) mentions as external project factor that have to be taken into account, the factor size. This factor is also added to the questionnaire.

2.3 Success of implementation

Investigating success criteria on projects, John Wateridge (1995) discovered that a necessary condition for project success was for the stakeholders to have a common understanding of the success criteria before the project started. Where they did not, then it usually led to failure, at least in the eyes of some of the stakeholders. This is fairly obvious. The success criteria should be agreed with the stakeholders before the project starts because if you don't:

1. Some stakeholders may not share the common view about what the project is doing
2. Quite small differences in direction at the start can lead to quite divergence in position at the end. For instance, the project team may agree the project objectives, but differences of opinion about the relative importance of time, cost or functionality can lead to quite substantially different outcomes.

As well as agreeing the success criteria with the stakeholders before you start, he suggests you need to go on reminding yourself and the stakeholders what they are, and to agree any changes, at configuration review points throughout the project.

R. Müller (2003) described three other necessary conditions for project success:

1. There must be high levels of collaboration between the project manager and the project owner. The project must be viewed as a partnership by all the project participants. The project is a temporary organization and the people working for that temporary organization must work well together. This is fairly obvious, but unfortunately, so often the project becomes a fearful battle between the project manager and project owner.
2. The owner should only impose medium levels of structure on the project manager, not too much structure, not too little. Too much structure means that the project manager will not have sufficient flexibility to deal with risks and uncertainties that arise. Too little and laissez-faire management and anarchy will reign. Clear objectives need to be agreed between the owner and the project manager, what must be seen as guidance about how these objectives are best achieved, but leave the project manager room to manoeuvre to deal with risk and uncertainty, the project manager should be empowered.
3. The owner should demand regular project performance reports. Müller discovered there was a mismatch between the project performance reports wanted by project owners and what project managers wanted to supply. Owners had a much greater desire for project performance reports than project managers were willing to give.

Procaccino and Verner (2002) investigated those factors that influence software practitioners' view of project success. Their survey shows that the practitioner's view comprises two categories, namely personal factors associated with the work and customer/user factors.

The personal factor category includes a sense of achievement while working on a project, a good job was done (i.e. a quality was delivered), the project working was satisfying and resulted in professional growth.

The customer/user category includes the customer/users were involved, they had realistic expectations and the project met all their requirements.

The purpose of the research was to investigate those factors that influence software practitioners' perception of project success. The factors that influence practitioner's perceptions of project success are important because before it can be discovered if a project has been a success, and what factors contributed to that success, it is necessary to define success. There is, however, no agreement on what software project success is, particularly among the various project stakeholders, which include senior management, project managers, developers and customers/users. A general definition of a successful software project is one that "meets its budget, delivery and business objectives", while a

failed project is one that has been cancelled or does not meet its objectives. Other definitions, some of which are from a project manager's viewpoint, include the degree to which the project achieved its goals, cost schedule, functionality/scope, user satisfaction, effective project teamwork, professional satisfaction on the part of the project manager, on-time and within budget, reliable, maintainable and met the goals and requirements of the users. (Hagerty, 2000 and Lindberg, 1999). Many studies have shown that project success and failure is a question of perception and that the criteria could vary from project to project. (Pinto and Mandel (1990), Wateridge (1995 and 1998)). The only criteria with strong agreement among all the involved parties (in a study of several projects), were: "meets user's requirements, achieves purposes, meets timescale, meets budget, happy users and meets quality". A project that has been perceived to be a failure by one stakeholder may be perceived as a success by another (Bennatan, 1996). Practitioner's view of success (and failure) is important to the process of developing software due to practitioner's critical role in the process, and their unique view among project stakeholders. Practitioners are on the front line in the design and construction of software, both in terms of what they do and with whom they interact. These interactions are both between their management, and customers and users of the system being developed. We expect to confirm previous research that suggests that interactions with these stakeholders will play a major role in shaping the typical practitioner's perception of project success and failure (McConnell, 1996).

About the validation of the questionnaires, the authors of "Software Practitioner's Perception of Project Success: A Pilot Study, Procaccino and Verner, 2002" is nothing said.

3. Analysis

3.1 Introduction

We analysed the relationship between different leadership styles and success of implementation and how this is influenced by project type. This was done using quantitative analyse techniques. First we discuss the conceptual model, in the next paragraph the step from model to hypotheses.

3.2 Conceptual model

This research shows the relation between the factors leadership styles, type of project and success of implementation.

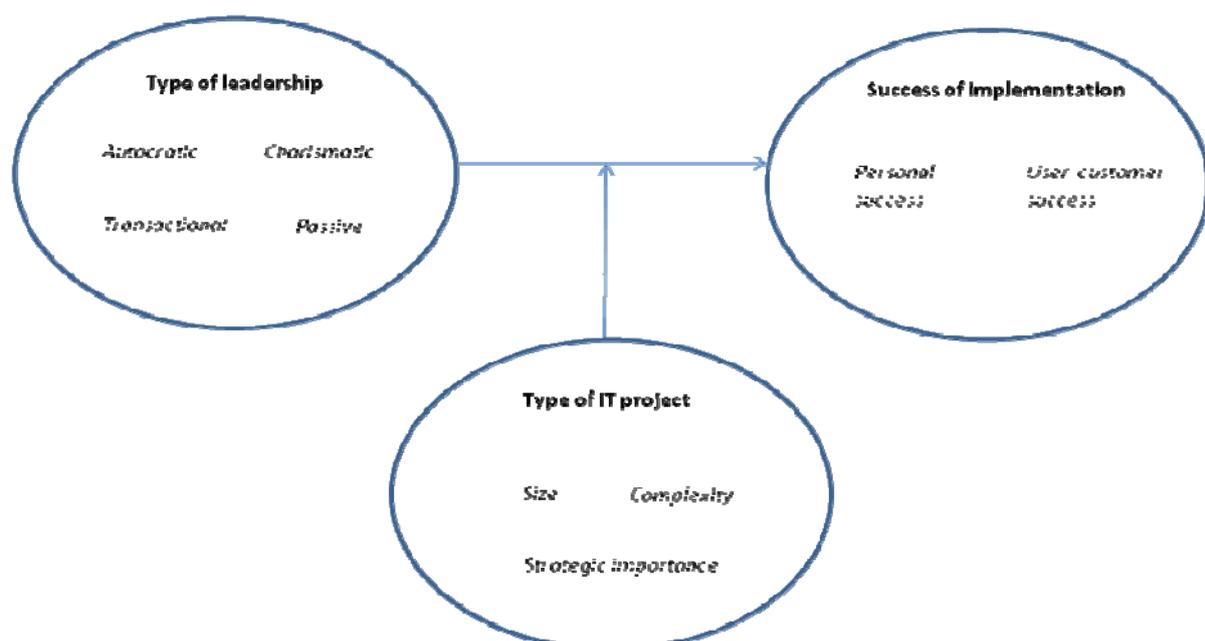
The main question is:

- What is the relationship between type of leadership style and the success of implementation, considering different types of project.

Other divided questions are:

1. What is de relation between type of leadership style and success of implementation
2. What is the relation between type of project and type of leadership style
3. What is de relation between type of project and success of implementation

The conceptual model is:



3.3 Hypotheses

Research studies on leadership style in IT projects, show that transformational/ technical leadership is more successful than transactional leadership (Thite, 2000). De Hoogh et al. (2004) explain the term transformational in more parts and use in their CLIO the term charismatic. Characteristics of charismatic leadership are dependency and empowerment of the practitioners. According to the research of Procaccino and Verner (2002), the most important factors shaping practitioners' perceptions of project success are made up of two factors; namely the importance of personal aspects of the work and customers/users involvement. As such, the first hypothesis is:

Hypothesis 1: There is a positive relation between charismatic leadership and personal success of implementation

Autocratic leadership style shows itself by trying to extend the power of the leader and increase the dependency of the practitioners. In the Netherlands there is strong wish to equality between leaders and subordinates, so the autocratic leadership is seen as not effective (De Hoogh et al, 2004). Geddes (1990) names the project leader's role is primarily one of managing the network of individuals who make up the team. Lee-Kelley *et al.* (2003) define the role of a project leader in the constitution and the maintenance of a team climate that is conducive to goal congruence and "team-ness" is key. Based on previous, the second hypothesis is:

Hypothesis 2: There is a negative relation between autocratic leadership and success of implementation from the user/customer

On both project success criteria and critical success factors for projects there has been significant research. The need to relate critical success factors to project success criteria is identified in both theory and practice. The Project Excellence Model, based on the EFQM-model is designed to link project success criteria and critical success factors into one coherent model. The choice of the most adequate project type for a specific project is based on the desired project goals set on the result areas and the external factors influencing the project (E. Westerville, 2003). Many authors have suggested as earlier mentioned in this research, the term transformational leadership is equal to charismatic leadership. Müller and Turner (2007) conclude in their study that on high complexity projects sensitivity is important. These competencies are associated more with transformational leadership than transactional leadership. Based on this conclusion, the next hypothesis is formulated:

Hypothesis 3: There is a positive relation between charismatic leadership and complexity of project

Procaccino and Verner (2002) had in their research beside the 29 success questions as two open-ended questions. One of these two questions was: Think of projects that you considered to be a success. Why do you consider it to be successful? Answers on these questions were: " People liked using the product" and "Product was used a longtime by many people". Looking at different project types, throughout the life-cycle, conscientiousness and communication are important. At the design stage managing resources is also important, and motivation and sensitivity at the commissioning stage. Strategic perspective is detrimental to project success, except during feasibility and close-out (Müller and Turner, 2007). Geddes (1990) indicates the projects should be seen as partnerships working toward a common goal. This may require stakeholders and team members to subordinate their own selfish reasons for the benefit of the project as a whole. Westerveld (2003) concludes in a case study that linking the result areas of the project to the organizational areas could provide good insight for improving the functioning of the project organization. Therefore, the following is hypothesized:

Hypothesis 4: There is a positive relation between strategic importance and personal success of implementation

4. Method

4.1 Introduction

The population is a mix of Users, Project managers and Project members of IT projects. The questionnaire was sent by email to 198 people. Beside the questionnaire an introduction mail was sent, what explained the purpose and timeframe of the research. The response was 81 filled in questionnaires, what is a response of almost 41%. An overview of the respondents characteristics are described in Appendix 1, Descriptives.

4.2 Sample

The questions, beside the general questions like age and roll, were all measured with a 5-point Likert scale. The respondents had a possibility also to fill in a "6", what means "not applicable/don't know". This clarifies why not all questions do have a value (see *Appendix 2, Correlations*).

In the questionnaire (see *Appendix 3, Questionnaire*) also are 27 questions about the leadership style of the line manager of the users/project members. The results of this part are ignored in the formulation of the hypothesis. This is because of the fact that, considering a lot of the reactions of the respondents, the questions are not understood correctly. So formulating a hypothesis on this part would have a very big chance to investigate the wrong.

4.3 Quantitative / Qualitative Research

Qualitative and quantitative research is the two main schools of research, and although they are often used in tandem, the benefits and disadvantages of each are hotly debated. Particularly in the social sciences, the merits of both qualitative and quantitative research are fought over, with intense views held on both sides of the argument. It is generally agreed upon, however, that there are some phases of research where one or the other is clearly more useful than the other and so few people completely dismiss either. Qualitative research is a much more subjective form of research, in which the research allows themselves to introduce their own bias to help form a more complete picture. Qualitative research may be necessary in situations where it is unclear what exactly is being looked for in a study, so that the researcher needs to be able to determine what data is important and what isn't. While quantitative research generally knows exactly what it's looking for before the research begins, in qualitative research the focus of the study may become more apparent as time progresses.

Often the data presented from qualitative research will be much less concrete than pure numbers as data. Instead, qualitative research may yield stories, or pictures, or descriptions of feelings and emotions. The interpretations given by research subjects are given weight in qualitative research, so there is no seeking to limit their bias. At the same time, researchers tend to become more emotionally attached to qualitative research, and so their own bias may also play heavily into the results.

Within the social sciences, there are two opposing schools of thought. One holds that fields like sociology and psychology should attempt to be as rigorous and quantitative as possible, in order to yield results that can be more easily generalized, and in order to sustain the respect of the scientific community. Another holds that these fields benefit from qualitative research, as it allows for a richer study of a subject, and allows for information to be gathered that would otherwise be entirely missed by a quantitative approach. Although attempts have been made in recent years to find a stronger synthesis between the two, the debate rages on, with many social scientists falling sharply on one side or the other.

Quantitative research, on the other hand, is probably the less contentious of the two schools, as it is more closely aligned with what is viewed as the classical scientific paradigm. Quantitative research involves gathering data that is absolute, such as numerical data, so that it can be examined in as unbiased a manner as possible. There are many principles that go along with quantitative research, which help promote its supposed neutrality. Quantitative research generally comes later in a research project, once the scope of the project is well understood.

The main idea behind quantitative research is to be able to separate things easily so that they can be counted and modeled statistically, to remove factors that may distract from the intent of the research. A researcher generally has a very clear idea what is being measured before they start measuring it, and their study is set up with controls and a very clear blueprint. Tools used are intended to minimize any bias, so ideally are machines that collect information, and less ideally would be carefully randomized surveys. The result of quantitative research is a collection of numbers, which can be subjected to statistical analysis to come to results.

Remaining separate from the research emotionally is a key aspect of quantitative research, as is removing researcher bias. For things like sociological data, this means that the majority of bias is hopefully limited to that introduced by the people being studied, which can be somewhat accounted for in models. Quantitative is ideal for testing hypotheses, and for hard sciences trying to answer specific questions.

For this research is chosen for a quantitative approach of the data, because of the arguments mentioned above. ^[1]

4.4 Measures

The leadership style is measured by using the CLIO by De Hoogh, Koopman and Den Hartog (2004). About the validation of the CLIO, following can be said: the questionnaire is not developed to the end and definitive. Future investigation must prove the validity of the questionnaire. Also compare the CLIO with other questionnaires in the leadership literature. This will improve the CLIO. For this investigation the CLIO was useful.

This questionnaire investigates the Charismatic Leadership in Organisations (CLIO). The questionnaire contains out of 4 variables: Passive Leadership, Autocratic Leadership, Transactional and Charismatic Leadership. The questionnaire consists of 27 items.

Autocratic Leadership

The Autocratic Leadership of the project manager is measured with six items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The six items were about if a leader is not consulting his team for making decisions. The eleven items exhibited internal consistency reliability (Cronbach's alpha) of 0.57.

Charismatic Leadership

The Charismatic Leadership of the project manager is measured with eleven items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The eleven items were stimulating employees to think independent and think out-of-the-box, participation and delegation, stimulate to develop, making the employees enthusiastic, communicating with them, having vision, showing his/her ideals and consideration, and giving employees the idea they do important work. The eleven items exhibited internal consistency reliability (Cronbach's alpha) of 0.91.

Passive Leadership

The Passive Leadership of the project manager is measured with four items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The four items were about avoiding the responsibility of a leader. The four items exhibited internal consistency reliability (Cronbach's alpha) of 0.93.

^[1] Source: <http://www.wisageek.com/what-is-the-difference-between-quantitative-and-qualitative-research.htm>, 10 May 2010

Transactional Leadership

The Transactional Leadership of the project manager is measured with six items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The six items were about avoiding the responsibility of a leader. The four items exhibited internal consistency reliability (Cronbach's alpha) of 0.93.

The type of project is measured by using a characterization of Crawford et al. (2005). The used characteristics are Size, Complexity and Strategic Importance, which are the variables in het questionnaire. The questionnaire consists of 10 items.

Size

The Size of the project is measured with three items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The three items were asking if more divisions were involved, a clear scope to the respondent and a clear scope to all involved. The three items exhibited internal consistency reliability (Cronbach's alpha) of 0.66.

Complexity

The Complexity of the project is measured with six items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The six items were asking if the project was complex, the impact of the project for the organization, stability of the scope during the project, and the type of the IT change (substitute or expand). The six items exhibited internal consistency reliability (Cronbach's alpha) of 0.70.

Strategic Importance

The Strategic Importance of the project is measured with one item using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The item was about if the change had strategic importance. The item exhibited internal consistency reliability (Cronbach's alpha) of 1.0.

The success of implementation is measured by using a characterization of Procaccino and Verner (2002). The used characteristics are Personal Success and User's/ Organization's Success, which are the variables in het questionnaire. The questionnaire consists of 14 items.

Personal Success

The Personal Success is measured with eight items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The eight items were asking if working on

the project satisfied, the effort was appreciated, the interviewed was happy with the new system and working on the project had a growth of knowledge as a result. The eight items exhibited internal consistency reliability (Cronbach's alpha) of 0.89.

User's / Organization's Success

The User's / Organization's Success is measured with six items using a 5-point Likert scale, ranging van 1 (totally disagree) to 5 (totally agree). The six items were asking if the users had a realistic expectation about the outcome, the result of the project was an improvement of collaboration and the project finished in time. The six items exhibited internal consistency reliability (Cronbach's alpha) of 0.87.

4.5 Correlation analysis

In Appendix 1 the correlations between the variables are described. Both axes contain the same variables, so only one side of the table contains data.

One asterisk means that the relation between the variables is significant at the 0.05 level (2-tailed).

5. Results

The results of the questionnaires are digitally processed with the program SPSS, version 16.0. The correlation is researched, what means that the strength and direction of the relations described. The value of the result is between -1 and +1, at which 0 means that there is no relation, -1 means a perfect negative relation and +1 a perfect positive relation.

This analysis gives information about a possible relation. When there is no relation between to items, the hypothesis can be rejected.

H1. There is a positive relation between charismatic leadership and personal success of implementation

This hypothesis presumes a positive relation between the charismatic leadership and personal success of implementation. The correlation is .398, the relation between the variables is significant at the 0.01 level (2-tailed). This means that the relation is weak and the chance for coincidence is very low. These results supports hypothesis 1, which stated that charismatic leadership affects personal success of implementation.

Correlation

		Charismatic leadership	Personal success of implementation
Charismatic leadership	Pearson's Correlation Sig. (2-tailed)	1	0,398** .000
Personal success of implementation	Pearson's Correlation Sig. (2-tailed)	0,398** .000	1

** Correlation is significant at the 0.01 level (2-tailed)

H2. There is a negative relation between autocratic leadership and success of implementation from the user/customer

This hypothesis presumes a negative relation between the autocratic leadership and success of implementation from the user/customer. The correlation is -.130. The significance between the variables is more than 0,05. This means that the relation is negative and very weak between the variables, and the chance for coincidence is relatively high. Based upon this outcome, the hypothesis is rejected.

Correlation

		Autocratic leadership	Success of implementation from the user/customer

Autocratic leadership	Pearson's Correlation Sig. (2-tailed)	1	-.130	.247
Success of implementation from the user/customer	Pearson's Correlation Sig. (2-tailed)	-.130	.247	1

H3. There is a positive relation between charismatic leadership and complexity of project

This hypothesis presumes a positive relation between the charismatic leadership and complexity of project. The correlation is .595, the relation between the variables is significant at the 0.01 level (2-tailed). This means that the relation is rather strong and the chance for coincidence is very low. These results supports hypothesis 3, which stated that charismatic leadership affects the complexity of project.

Correlation

		Autocratic leadership	Complexity of project
Autocratic leadership	Pearson's Correlation Sig. (2-tailed)	1	,595** .000
Complexity of project	Pearson's Correlation Sig. (2-tailed)	,595** .000	1

** Correlation is significant at the 0.01 level (2-tailed)

H4. There is a positive relation between strategic importance and personal success of implementation

This hypothesis presumes a positive relation between strategic importance and personal success of implementation. The correlation is .504, the relation between the variables is significant at the 0.01 level (2-tailed). This means that the relation is strong and the chance for coincidence is very low. These results supports hypothesis 4, which stated that strategic importance affects personal success of implementation.

Correlation

		Strategic importance	Personal success of implementation
Strategic importance	Pearson's Correlation Sig. (2-tailed)	1	,504** .000
Personal success of implementation	Pearson's Correlation Sig. (2-tailed)	,504** .000	1

** Correlation is significant at the 0.01 level (2-tailed)

6. Conclusion and reflection

6.1 Introduction

In this chapter we want to answer the questions of this research. As former in this research formulated, the questions are:

The main question is:

- What is the relationship between type of leadership and the success of implementation, considering different types of project.

Other divided questions are:

1. What is de relation between type of leadership and success of implementation
2. What is the relation between type of project and type of leadership
3. What is de relation between type of project and success of implementation

6.2 Conclusion

The first question concerns about the relation between type of leadership style and success of implementation.

From the 2 formulated hypotheses the first one was accepted, which presumed a positive relation between the charismatic leadership style and personal success of implementation. The relation is weak, so this means that charismatic leadership has a positive outcome to personal success of implementation. The result of this research is not the same as the outcomes of the CLIO research. The reason is possibly the smaller number of respondents in my research. Another reason can be that my research was focused on IT projects, there where the CLIO has no specific focus. It seems that practitioners in IT projects need more steering than taking all the responsibility to them.

The second hypothesis was rejected because the relation was very weak and the chance for coincidence relatively high. Comparing this result again to the outcome of the CLIO research, it is different with it. This can be seen as a relativization to the CLIO, and can be connected to the comment to the first hypothesis, that it seems that practitioners in IT projects need more steering. On the other hand, the outcome of this hypothesis is not that strong, that it can be a statement.

Based upon the results of the research, charismatic leadership style has a positive contribution to success of implementation.

The second question concerns about the relation between type of leadership style and the type of project. The formulated hypothesis was accepted, with a rather strong relationship. The outcome of this hypothesis joins other researchers (e.g. Müller and Turner) whereby for more complex projects project managers are assigned, who have a higher emotional competence (ingredient of charismatic leadership). In this case the IT projects do not differ from "general" projects.

Based upon the results of the research, charismatic leadership has a positive contribution to complexity of the project.

The third question concerns about the relation between the type of project and success of implementation. The formulated hypothesis was the positive relationship between strategic importance and personal success of implementation. Other researches did not investigate the explicit relation between strategic importance and personal success of implementation. The focus of other researchers is more on what kind of characteristics a project manager needs to be successful in different kind of projects. The most respondents of this questionnaire were practitioners and their statement is that there is a positive relation between strategic importance and success of implementation. Based upon the results of the research, this hypothesis is accepted.

The main question was what is the relationship between type of leadership style and the success of implementation, considering different types of project.

We see that charismatic leadership style has a positive relation with success of implementation, as well for personal as for the user/customer situation. This is supporting the outcome of the model of Bass and Avolio (1990).

Second, there is a positive relationship between the type of project and personal success of implementation. A more complex, bigger sized and strategic more important project have a positive relation to personal success of implementation.

Third, there is a positive relationship between a charismatic leadership style and the type of project. A charismatic leadership style has a positive relation with a complex, big sized and strategic more important project.

Comparing this research to a rather large number of researches, investigations, papers etc. there is a difference in focus. Many researches have been done with the subject what

the role of project management is in achieving project success. All kind of focuses has been made such as 'how project success can be measured', 'necessary conditions for project successes and 'a framework for analyses. They were very useful for my research but the contribution of this research to all the researches on this area is that my research is combining the leadership style with personal and customer/user satisfaction. Many researches focus on the leadership style of the project manager and his competencies to meet the external factors of a project (clear defined scope, stakeholders support, collaboration between the project manager and project owner, meets budget, time and user specifications). These are all essential elements of the characteristics of a project leader, I absolute will agree. My research is focussing on the personal and customer/user satisfaction, a rather untouched element. The surplus value of a project manager, who has attention to this aspect, has an extra aspect to motivate his team members. On the other hand, he needs to have another competency to manage this. It must be said that most projects have a (more or less) strategic importance, for the simple reason that a project costs a lot of money and there are not so many organizations that has lust in spending money with a very little importance. The significance is how to define strategic importance, is for the whole company/organization, or is it (strategic) important for a division, or just one team.

The limitation of this research and the explored method (questionnaire sent by email to the population) is that definition of strategic importance and size are left to the estimation of the respondent. As written, the significance is how to define strategic importance and this applies also for size. Other limitation is that in the questionnaire it was not asked if the project meets/met the budget. For example the Thames Barrier project took twice as long to build and cost four times the original budget, but provided a profit for most contractors/practitioners. It was considered a success. This research gives not an answer to the situation if a project what is successful according to personal or customers/users' view.

Another limitation is that all the used questionnaires – of CLIO, Procaccino and Verner and also the questionnaire of Crawford - are not validated.

The last limitation I will mention is that the questionnaire is filled in by only 81 people. The results of the research will become stronger when a larger group of people will fill in the questionnaire.

6.3 Suggestions for further investigation

De Hoogh *et al.* implicate that in countries with a small power distance between project leaders and project practitioners the most effective leadership style is a combination of participative and charismatic leadership. The Netherlands are a country with a small

power distance, so it can be interesting to investigate if this leadership style is more effective than charismatic alone.

Another suggestion is to continue my investigation and to eliminate my limitations, to get a more integral investigation on the project manager's leadership style and the result on the "human" side of a project. It must be realized that this kind of leadership in my opinion is adding a new competence for project leadership. The nicest investigation would be a comparative investigation in a similar situation where the difference is in project leaders with and without the competence for the "human" side.

I will recommend a research for validating the questionnaires of CLIO, Procaccino and Verner and also of Crawford. That will make the results of my research stronger.

The last recommendation is to repeat the research on a larger group of people.

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8. Appendices

Appendix 1 Descriptives

Statistics

		Geslacht	Leeftijd	Functie	Soort organisatie (profit / non profit)
N	Valid	81	81	81	81
	Missing	0	0	0	0

Frequency Table

Geslacht

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	man	64	79,0	79,0	79,0
	vrouw	17	21,0	21,0	100,0
Total		81	100,0	100,0	

Leeftijd

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Jonger dan 26 jaar	6	7,4	7,4	7,4
	26 jaar of ouder maar jonger dan 36 jaar	26	32,1	32,1	39,5
	36 jaar of ouder maar jonger dan 46 jaar	31	38,3	38,3	77,8
	46 jaar of ouder maar jonger dan 56 jaar	18	22,2	22,2	100,0
	Total	81	100,0	100,0	

Functie

Statistics

		Geslacht	Leeftijd	Functie	Soort organisatie (profit / non profit)
Valid		81	81	81	81
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Eindgebruiker	14	17,3	17,3	17,3
	Project medewerker	56	69,1	69,1	86,4
	Manager	11	13,6	13,6	100,0
	Total	81	100,0	100,0	

Soort organisatie (profit / non profit)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Profit organisatie	79	97,5	97,5	97,5
	Non-profit organisatie	2	2,5	2,5	100,0
	Total	81	100,0	100,0	

	tailed)													
	N	72	72	69	72	72								
CHAL	Pearson Correlation	-.080	,671**	.008	,573**	-,367**	1							
	Sig. (2-tailed)	.503	.000	.946	.000	.002								
	N	72	72	69	72	72	72							
PASL	Pearson Correlation	.161	-,387**	,347**	-,315**	,334**	-,557**	1						
	Sig. (2-tailed)	.187	.001	.003	.008	.005	.000							
	N	69	69	69	69	69	69	69						
TRAL	Pearson Correlation	-.062	,634**	.025	,669**	-,343**	,919**	-,538**	1					
	Sig. (2-tailed)	.604	.000	.841	.000	.003	.000	.000						
	N	72	72	69	72	72	72	69	72					
OMV	Pearson Correlation	-,237*	,461**	-.053	,492**	-.075	.232	.085	.207	1				
	Sig. (2-tailed)	.033	.000	.642	.000	.531	.050	.487	.082					
	N	81	81	78	81	72	72	69	72	81				

CPX	Pearson Correlation	-.021	,595**	.117	,436**	.157	.205	.142	.196	,569**	1			
	Sig. (2-tailed)	.852	.000	.306	.000	.187	.085	.243	.099	.000				
	N	81	81	78	81	72	72	69	72	81	81			
SBL	Pearson Correlation	-.072	,256*	.175	,252*	.092	,366**	-.081	,386**	,288*	,295**	1		
	Sig. (2-tailed)	.536	.025	.128	.027	.454	.002	.510	.001	.011	.009			
	N	77	77	77	77	68	68	68	68	77	77	77		
PSL	Pearson Correlation	.023	,398**	.211	,301**	.203	,357**	.032	,307**	,422**	,401**	,504**	1	
	Sig. (2-tailed)	.841	.000	.063	.006	.088	.002	.792	.009	.000	.000	.000		
	N	81	81	78	81	72	72	69	72	81	81	77	81	
GBO	Pearson Correlation	-.130	,366**	,278*	,306**	-.100	,445**	-.057	,401**	,277*	,318**	,610**	,785**	1
	Sig. (2-tailed)	.247	.001	.014	.005	.401	.000	.641	.000	.012	.004	.000	.000	
	N	81	81	78	81	72	72	69	72	81	81	77	81	81

Appendix 3 Questionnaire

ALGEMEEN

Vraag	Code	Omschrijving	Antwoordmogelijkheden	Keuze
1	ALG1	Wat is uw geslacht?	1. Man 2. Vrouw	
2	ALG2	Wat is uw leeftijd?	1. < 26 jaar 2. 26-35 jaar 3. 36-45 jaar 4. 46-55 jaar 5. > 55 jaar	
3	FUN1	Wat is uw functie? (Meerdere antwoorden mogelijk!)	1. Eindgebruiker 2. Project medewerker 3. Manager	
4	FUN2	Soort organisatie	1. Profit 2. Non-profit	

LEIDERSCHAP

De vragen over leiderschap zijn verdeeld in 2 delen:

Deel 1 gaat over het **leiderschap van de Projectleider/Projectmanager**

Deel 2 gaat over het **leiderschap van de Manager van eigen organisatie** die verantwoordelijk was voor de afdeling tijdens en/of na het project.

Antwoordschaal	
1	Helemaal mee oneens
2	Niet helemaal mee oneens
3	noch mee eens, noch mee oneens
4	Niet helemaal mee eens
5	Helemaal mee eens
6	Niet van Toepassing / weet niet

In de kolom **Keuze** kunt u het nummer van de Antwoordschaal invullen.

Deel 1 leiderschap van de Projectleider/Projectmanager

Variabele	Code	Items	Schaal	Bron
Passief	PAS	4	Helemaal niet me eens – Helemaal mee eens	CLIO
Autocratisch	AUT	6	Helemaal niet me eens – Helemaal mee eens	CLIO
Transactioneel	TRA	6	Helemaal niet me eens – Helemaal mee eens	CLIO
Charismatisch	CHA	11	Helemaal niet me eens – Helemaal mee eens	CLIO

Vraag nr	Code	Omschrijving	Antwoordschaal	Keuze
5	AUTP1	Duldt geen afwijkende meningen meer als hij / zij een beslissing heeft genomen.	1 2 3 4 5 6	
6	AUTP2	Treedt hard op als het moet.	1 2 3 4 5 6	
7	AUTP3	Is de baas en geeft bevelen als het erop aankomt.	1 2 3 4 5 6	
8	AUTP4	Vindt dat er uiteindelijk één de baas moet zijn.	1 2 3 4 5 6	
9	AUTP5	Verliest zijn / haar eigenbelang nooit uit het oog.	1 2 3 4 5 6	
10	AUTP6	Beoordeelt nieuwe ideeën kritisch.	1 2 3 4 5 6	
11	CHAP1	Moedigt medewerkers aan om onafhankelijk te denken	1 2 3 4 5 6	
12	CHAP2	Betrekt medewerkers bij besluiten die van belang zijn voor hun werk.	1 2 3 4 5 6	
13	CHAP3	Stimuleert medewerkers hun talenten zo goed mogelijk te ontwikkelen.	1 2 3 4 5 6	
14	CHAP4	Is in staat anderen enthousiast te maken voor zijn/haar plannen.	1 2 3 4 5 6	
15	CHAP5	Praat met medewerkers over wat voor hen belangrijk is.	1 2 3 4 5 6	

16	CHAP6	Heeft visie en een beeld van de toekomst.	1 2 3 4 5 6	
17	CHAP7	Stimuleert medewerkers om op nieuwe manieren over problemen na te denken.	1 2 3 4 5 6	
18	CHAP8	Delegeert uitdagende verantwoordelijkheden aan medewerkers.	1 2 3 4 5 6	
19	CHAP9	Laat zien overtuigd te zijn van zijn / haar idealen, opvattingen en waarden.	1 2 3 4 5 6	
20	CHAP10	Is altijd op zoek naar nieuwe mogelijkheden voor de organisatie.	1 2 3 4 5 6	
21	CHAP11	Geeft medewerkers het gevoel aan een belangrijke, gemeenschappelijke missie / opdracht te werken.	1 2 3 4 5 6	
22	PASP1	Toont zich aanhanger van het gezegde 'grijp alleen in als het noodzakelijk is'.	1 2 3 4 5 6	
23	PASP2	Komt pas in actie wanneer problemen chronisch worden.	1 2 3 4 5 6	
24	PASP3	Onderneemt geen poging tot verbetering, zolang het werk beantwoordt aan de gestelde eisen.	1 2 3 4 5 6	
25	PASP4	Vermijdt betrokken te raken bij tijdrovende kwesties.	1 2 3 4 5 6	
26	TRAP1	Is betrouwbaar in het nakomen van zijn / haar verplichtingen.	1 2 3 4 5 6	
27	TRAP2	Is te vertrouwen, houdt zich aan zijn / haar woord.	1 2 3 4 5 6	
28	TRAP3	Ziet erop toe dat afspraken worden nagekomen.	1 2 3 4 5 6	
29	TRAP4	Hecht veel waarde aan heldere afspraken en een eerlijke beloning.	1 2 3 4 5 6	
30	TRAP5	Zorgt ervoor dat de randvoorwaarden worden geschapen zodanig dat medewerkers hun werk goed kunnen doen.	1 2 3 4 5 6	
31	TRAP6	Bekritiseert medewerkers alleen met goede redenen.	1 2 3 4 5 6	

Deel 2 leiderschap van de Manager van eigen organisatie

Vraag nr	Code	Omschrijving	Antwoord schaal	Keuze
32	AUTL1	Duldt geen afwijkende meningen meer als hij / zij een beslissing	1 2 3 4 5 6	

		heeft genomen.		
33	AUTL2	Treedt hard op als het moet.	1 2 3 4 5 6	
34	AUTL3	Is de baas en geeft bevelen als het erop aankomt.	1 2 3 4 5 6	
35	AUTL4	Vindt dat er uiteindelijk één de baas moet zijn.	1 2 3 4 5 6	
36	AUTL5	Verliest zijn / haar eigenbelang nooit uit het oog.	1 2 3 4 5 6	
37	AUTL6	Beoordeelt nieuwe ideeën kritisch.	1 2 3 4 5 6	
38	CHAL1	Moedigt medewerkers aan om onafhankelijk te denken	1 2 3 4 5 6	
39	CHAL2	Betrekt medewerkers bij besluiten die van belang zijn voor hun werk.	1 2 3 4 5 6	
40	CHAL3	Stimuleert medewerkers hun talenten zo goed mogelijk te ontwikkelen.	1 2 3 4 5 6	
41	CHAL4	Is in staat anderen enthousiast te maken voor zijn/haar plannen.	1 2 3 4 5 6	
42	CHAL5	Praat met medewerkers over wat voor hen belangrijk is.	1 2 3 4 5 6	
43	CHAL6	Heeft visie en een beeld van de toekomst.	1 2 3 4 5 6	
44	CHAL7	Stimuleert medewerkers om op nieuwe manieren over problemen na te denken.	1 2 3 4 5 6	
45	CHAL8	Delegeert uitdagende verantwoordelijkheden aan medewerkers.	1 2 3 4 5 6	
46	CHAL9	Laat zien overtuigd te zijn van zijn / haar idealen, opvattingen en waarden.	1 2 3 4 5 6	
47	CHAL10	Is altijd op zoek naar nieuwe mogelijkheden voor de organisatie.	1 2 3 4 5 6	
48	CHAL11	Geeft medewerkers het gevoel aan een belangrijke, gemeenschappelijke missie / opdracht te werken.	1 2 3 4 5 6	
49	PASL1	Toont zich aanhanger van het gezegde 'grijp alleen in als het noodzakelijk is'.	1 2 3 4 5 6	
50	PASL2	Komt pas in actie wanneer problemen chronisch worden.	1 2 3 4 5 6	
51	PASL3	Onderneemt geen poging tot verbetering, zolang het werk beantwoordt aan de gestelde eisen.	1 2 3 4 5 6	
52	PASL4	Vermijdt betrokken te raken bij tijdrovende kwesties.	1 2 3 4 5 6	
53	TRAL1	Is betrouwbaar in het nakomen van zijn / haar verplichtingen.	1 2 3 4 5 6	
54	TRAL2	Is te vertrouwen, houdt zich aan zijn / haar woord.	1 2 3 4 5 6	

55	TRAL3	Ziet erop toe dat afspraken worden nagekomen.	1 2 3 4 5 6	
56	TRAL4	Hecht veel waarde aan heldere afspraken en een eerlijke beloning.	1 2 3 4 5 6	
57	TRAL5	Zorgt ervoor dat de randvoorwaarden worden geschapen zodanig dat medewerkers hun werk goed kunnen doen.	1 2 3 4 5 6	
58	TRAL6	Bekritiseert medewerkers alleen met goede redenen.	1 2 3 4 5 6	

PROJECTTYPE

Variabele	Code	Items	Schaal	Bron
Omvang	OMV	3	Helemaal niet me eens – Helemaal mee eens	
Complexiteit	CPX	6	Helemaal niet me eens – Helemaal mee eens	
Strategisch belang	SBL	1	Helemaal niet me eens – Helemaal mee eens	

Vraag	Code	Omschrijving	Antwoord schaal	Keuze
59	OMV1	Het project had betrekking op meerdere afdelingen	1 2 3 4 5 6	
60	OMV2	De scope van het project was duidelijk bij mij	1 2 3 4 5 6	
61	OMV3	De scope van het project was duidelijk bij iedereen	1 2 3 4 5 6	
62	CPX1	Het project was complex	1 2 3 4 5 6	
63	CPX2	Het project had grote gevolgen voor de organisatie	1 2 3 4 5 6	
64	CPX3	Het project werd goed geleid door de projectleiding	1 2 3 4 5 6	
65	CPX4	De scope van het project was stabiel gedurende het project	1 2 3 4 5 6	
66	CPX5	Het project verving een bestaand systeem	1 2 3 4 5 6	
67	CPX6	Het project betrof een uitbreiding van het bestaande systeem	1 2 3 4 5 6	
68	SBL1	De wijziging was van strategisch belang	1 2 3 4 5 6	

SUCCES VAN DE IMPLEMENTATIE

Variabele	Code	Items	Schaal	Bron
Persoonlijk	PSL	8	Helemaal niet me eens – Helemaal mee eens	Drew Procaccino/ Verner
Gebruikers/ Organisatie	GBO	6	Helemaal niet me eens – Helemaal mee eens	Drew Procaccino/ Verner

Vraag	Code	Omschrijving	Antwoord schaal	Keuze
69	PSL1	Werken aan het project gaf mij voldoening	1 2 3 4 5 6	
70	PSL2	Mijn inbreng werd gewaardeerd	1 2 3 4 5 6	
71	PSL3	Het eindresultaat voldoet aan mijn wensen	1 2 3 4 5 6	
72	PSL4	De kwaliteit van het systeem vind ik goed	1 2 3 4 5 6	
73	PSL5	Ik ben blij met het nieuwe systeem	1 2 3 4 5 6	
74	PSL6	Ik ben helemaal gewend aan het nieuwe systeem	1 2 3 4 5 6	
75	PSL7	Werken in het project heeft je kennis doen groeien	1 2 3 4 5 6	
76	PSL8	Samenwerken met andere projectleden was prettig	1 2 3 4 5 6	
77	GBO1	De gebruikers hadden een realistische verwachting over de uitkomst	1 2 3 4 5 6	
78	GBO2	Het systeem geeft (deels) een oplossing voor het probleem wat was ontstaan	1 2 3 4 5 6	
79	GBO3	Anderen zijn blij met het nieuwe systeem	1 2 3 4 5 6	
80	GBO4	Door het nieuwe systeem werkt de afdeling/ organisatie beter	1 2 3 4 5 6	
81	GBO5	In het traject zijn voldoende mensen van de afdeling/ organisatie betrokken	1 2 3 4 5 6	
82	GBO6	Het project was op tijd af	1 2 3 4 5 6	