Increase project management effectiveness with the use of organizational culture related interventions.

VAN AETSVELD
verandermanagement, projectmanagement

Name: Annelouc Best

Student ID: 1552554

Company: Van Aetsveld, Amersfoort

Institution: University of Applied Sciences Utrecht, Hogeschool Utrecht

Organizational culture related interventions Van Aetsveld can use to increase project management effectiveness.

Name:	Annelouc Best		annelouc.best@student.hu.nl
Company supervisor:	Ms Laura de Faber		laura.de.faber@aetsveld.nl
First reader:	Mr Kobus Smit		kobus.smit@hu.nl
Second reader:	Ms Catherine Rau		catherine.rau@hu.nl

Student ID:	1552554
Year level:	Year 4
Course name:	International Business and Management Studies (IBMS)
Institution:	University of Applied Sciences Utrecht, Hogeschool Utrecht
Date:	June 2012

This research presents culture related interventions which increase project management effectiveness. From the results of this research, the culture related interventions, an interactive tool has been developed to make the results practicable for consultants of Van Aetsveld.

Foreword

This is probably the first page you read as a reader and the last page for me to write; the foreword, a notorious notice to express my gratitude.

During one of the Top Class courses about change management I realized that this, change management, is something for me. It triggered me in a way that I wanted to get to know more about it. Not only about the subject itself, but also about the lecturers who presented their knowledge and experience. My lecturer, Mr Harry Rorije, who was working for a company named Van Aetsveld also invited some colleagues to give guest lecturers on a specific topic. They had all one thing in common; you could notice the passion when they were talking about ´their´ subject. Then I knew it, this is the company where I want to do my graduation assignment. So here I am, roughly six months since the start of my internship, and truly a richer person (in knowledge). During the past months I have learned so much that I had to keep a small book with notes with me because I was afraid that I would forget important things. My company supervisor, Ms Laura de Faber, is one those who made this experience possible. I would like to thank her for all the freedom and trust she gave me, the opportunities to develop myself, the support and surely her enthusiasm and knowledge about the subject organizational culture. Having a great company supervisor truly makes a difference. Additionally I would like to thank all the Van Aetsveld employees who gave me an unforgettable time and made me feel at home.

I would like to express my gratitude towards my two readers from the Hogeschool Utrecht; my first reader Mr Kobus Smit and my second reader Ms Catherine Rau. Kobus, thank you for your enthusiasm and support during my research. You have helped me enormously with your knowledge and experience. Without your enthusiasm I would never had the courage to send in the research to the IPMA conference in Greece. I hope that we will get accepted. This way, a quite surreal dream would come true to present the paper for such an audience. Additionally I would like to thank my family, my parents and my two sisters Maud and Simone. Mom and dad, thank you for all the support, coffee, care and much more. You are both a great inspiration to me, thanks for your endless enthusiasm and pride. My sister Maud, thank you for your critical view on my work and talks about the subject. Furthermore, I want to thank my friends especially Anna-Marthe and Jeroen who helped me enormously. My IBMS girls, Marit, Maria and Josefin, thank you for all the fun during our four years of IBMS. We have become a great team together.

Annelouc Best – June 2012

`Dreams do not work unless you do´

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Executive summary

Although some research has been done on organizational culture (OC)[1] and project management (PM), there has been less focus on the relation between organizational culture related interventions and project management effectiveness. It is proposed that project management effectiveness can be increased with use of the right organizational culture related interventions. The general research question in this research is therefore, which organizational culture related interventions increase project management effectiveness? For this study an intervention is defined as an active, deliberate and planned action to accomplish, accelerate and/or influence the achievement of (project) results. A mix of qualitative and quantitative research has been performed in a middle sized Dutch project management consultancy firm, Van Aetsveld (VA), by means of a case study. Data was gathered through questionnaires, interviews, and focus groups under 47 project managers. In total 84 effective organizational culture related interventions have been retrieved. Respondents were asked about the interventions they use in different organizational cultures, phases of projects, for which target group and how these interventions have been related to project management effectiveness. From the data three different kinds of interventions were developed, based on the purpose they serve, namely controlling, connecting and actuating interventions. Each of these in turn contains its own sub-categories of interventions, a total of thirteen sub-categories have been defined. For example 'manage scope' and 'minimize discussions' (controlling interventions), ´connecting people´ and ´manage relationships´ (connecting interventions) and ´encourage creative thinking´ and ´ownership´ (actuating intervention).

The interventions were cross-tabulated against the competing values framework (Cameron and Quinn, 1999) and the relevant project phases as proposed in the PMBOK (1987). This has resulted in a tool that indicates which effective interventions work in which specific organizational culture, project phase and for which target group.

Additionally, the knowledge and use of Van Aetsveld consultants concerning the theme organizational culture has been researched. The research identified that roughly 30.9% of the consultants at Van Aetsveld know too little about the theme organizational culture to be able to use this knowledge in their work. The consultants who do make use of the theory of organizational culture (61.9%), mainly use the model of competing values (Cameron & Quinn, 1999). It has been recommended to increase the level of knowledge about organizational culture since it can have a positive effect on the effectiveness and competitive advantage of an organization (Kahlman, 2003 and Tharp, 2009).

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[1] Note: In this document 'culture' always refers to 'organizational culture' unless stated otherwise.

Introduction

This research is conducted in order to explore which organizational culture related interventions increase project management effectiveness. Since there has been minor focus on the link between project management effectiveness and organizational culture related interventions. This chapter involves literature research to provide insight in what is already known about organizational culture and project management. The research gap, which made this research necessary, will be explained from a literature perspective. The proposed hypothesis is that by using the right organizational culture related intervention project management effectiveness will increase.

During the beginning of the eighties organizational culture caught attention within organizations. Managers realized that organizational culture could lead to an increase of efficiency within companies (Cameron & Quinn, 1999). Organizational culture refers to the dominant culture within an organization. Another commonly used term is corporate culture. Previous literature provides many definitions of the term and distinguishes two themes within the organizational culture definitions (Al-alawi et al., 2007; Hofstede, 1980; Maull et al., 2001), namely observed phenomena (behavior) and hidden phenomena (beliefs). Cameron (2004) explains these two main foundations by saying that they are divided in sociological and anthropological disciplines. These disciplines are derived from ontology, a way of thinking in research philosophy, where the sociological discipline represents an objectivism view (companies have cultures) and the anthropological discipline a subjectivism view (companies are cultures) (Saunders, Lewis & Thornhill, 2009).

From these two disciplines two different approaches have been developed. On the one hand the functional approach which views culture as an attribute owned, sociological discipline, by a company emerging from behavior. This is similar to the observed phenomena (behavior). This functional approach suggests that changes in culture are possible, even as the measurement and identification of organizational cultures. Next to that organizational culture would be a good predictor for organizational outcomes, i.e. effectiveness. On the other hand, there is a semiotic approach, anthropological discipline, which believes that organizational culture emerges from individual interpretations and cognitions, the hidden phenomena (beliefs). This approach suggests that "nothing exists except culture" (Cameron, 2004).

One of the early organizational culture researchers, E. Schein (1986), defined culture as "the pattern of basic assumptions that the group has invented, discovered or developed in learning to cope with its problems [...] that has worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems".

More modern definitions are not very different from Schein's one. According to Sanders & Neuijen (1999) organizational culture is defined as a "collective understanding from the members and stakeholders of the company". Hofstede (1994) focuses his definition on values, rituals, heroes and symbols within organizations. Maull (2001) simplifies this by saying that organizational culture is `the way we do things around here'.

Organizational culture is often mixed with the term organizational climate according to Hicks- Clarke & Iles (2000). Where climate is more temporary, based on attitudes and can change dramatically and fast. Cultures are enduring, slow to change and includes core values. Culture is more about "how things are, it affects the way organization members think, feel, and behave" (Cameron, 2004).

Many models of organizational culture exist. Hofstede (2005), Schein (2004) and Quinn and Cameron (1999) contributed and developed well known and often used models. Where Hofstede (2005), Schein (2004) and Sanders & Neuijen (1999) give a description of cultural factors Quinn and Cameron also classify a certain culture.

A well-known model to describe culture is the onion model by Hofstede (2005). The different elements of culture are presented by metaphorical onion layers. The observed phenomena elements are presented on the outer layer and the hidden phenomena are established in the inner layer of the onion. Starting on the outer layer with symbols, followed by heroes of a culture and rituals. The core of the onion the culture, are the values (Hofstede, 2005).

Schein (2004) developed the levels of culture model. The model has a close link with the onion of Hofstede (2005). The model starts with a layer of artifacts, which are expressions of values and standards on the surface (Hofstede defines them as symbols and rituals). The second layer consists of cultural values; these are social principles and goals. The third and last layer is called basic assumptions, which are standards and perceived as truth (logical) for the members.

Another famous and often used organization culture model has been developed by Cameron and Quinn (1999), the Organizational Culture Assessment Instrument (OCAI) which results in the competing values framework. The framework describes organizational culture types by making the distinction between two factors namely (1) internal vs. external focus and (2) flexibility vs. stability. From these two variables, a matrix can be formed with four different organizational culture types. The Family (or clan) culture which is dominated by team work, participation and involvement, scores high on internal orientation and flexibility. The other internally oriented culture is the hierarchical culture type with a high score on control. This culture type is dominated by stability and standardized procedures and rules. External oriented cultures are the Adhocracy culture and the Market culture.

The latter is dominated by control as well. Other characteristics are a competitive focus, aggressive strategy and a clear goal. The Adhocracy culture is dominated by flexibility. Innovation and entrepreneurship are the main characteristics of this cultural type.

Some research has been done on organizational culture and project management. According to Thusman and O'Reilly (1997) organizational culture has influence on the project result and therefore project management. Hastings (1995) states that new projects will increasingly be based on informal, boundary spanning networks. Fong and Kwok (2009) researched the success of project management and organizational level in contracting firms were the Family culture (Cameron and Quinn, 1999) proved to be most popular. Furthermore, Cheung, Wong and Wu (2011) developed an organizational culture framework for the constructing industry, the seven-factor organizational culture framework.

Research on project management effectiveness abounds and only in the International Journal of Project Management (IJPM) more than 700 papers refer to effectiveness in the project management environment. Contributions in the form of project management methodologies that increase effectiveness are: PRINCE 2, PMBOK, IPMA, Dynamic Systems Development Method (DSDM) and Working by Project Basis (Berenschot, 2006). However, a methodology with organizational culture related interventions does not exist yet. This research will focus on this topic and will investigate which interventions can increase effectiveness in project management.

For this research four variables are used namely organizational culture, project phase, effectiveness and target group. Each intervention is defined and based on literature. Organizational culture is defined by the Organizational Culture Assessment Instrument (OCAI) of Cameron and Quinn (1999), which distinguishes four cultural types namely Family, Adhocracy, Hierarchy and Market culture. Furthermore, for this study an intervention is defined as an active, deliberate and planned action to accomplish, accelerate and/or influence the achievement of (project) results (Boonstra & Caluwé 2006; Caluwé & Vermaak, 2003). The variable project phase is a resultant from the project phases defined by PMBOK (1973). This results in initiating, execution, closing phase and during the whole project. Effectiveness is defined as 'getting the right things done' (Drucker, 2006). The last variable, target group, has been defined according to the Caluwé and Vermaak (2003) namely as individual, group and organization.

Research statement

Since there is a gap in the literature between organizational culture and project management effectiveness this study will focus on organizational culture related interventions. The hypothesis is that with the use of the right organizational culture related interventions project management effectiveness will increase, also called 'organizational culture aware project management'. The hypothesis has been supported by the consultants (eight) who have been interviewed and participated in the focus groups. Therefore, the research question is stated as followed: 'Which organizational culture related interventions increase project management effectiveness?'

It is necessary to research which organizational culture related interventions increase project management effectiveness since Van Aetsveld consultants often enter new organizations and environments which are dominated by a specific organizational culture. It is important for the Van Aetsveld consultants to adjust their interventions towards the culture in order to increase effectiveness. This research will highlight which organizational culture related interventions increase project management effectiveness. From these results, an interactive and user friendly tool will be created for project management consultants.

Research objectives

• To give insight in organizational culture related interventions that can increase project management **effectiveness** (sub-question).

• To give insight in organizational culture related interventions that can increase project management effectiveness in different **project phases** (sub-question).

• To **categorize** the different organizational culture related interventions into categories (sub-question).

• To develop an user friendly **tool** for consultants when, which project phase, to use which organizational culture related intervention, derived from Cameron & Quinn (1999) in order to increase project management effectiveness.

The target group of this research is the project managers at Van Aetsveld. This target group is interested in how to increase project management effectiveness, in other words, how to increase the quality of project results. The research hypothesis is partly shared within the organization. Although now all the consultants are aware of the positive effect which organizational culture aware project management can have by the use of focus groups.

Methodology

To answer the main research question three different types of research methods have been exploited, so called triangulation, namely a questionnaire, interview, and focus group. Two different research approaches are utilized, namely a quantitative and qualitative approach. The combination of the two methods builds on the strength of both (Schulze, 2003). This study involves a case study at a middle size Dutch consultancy firm; therefore all the results retrieved, except for literature, are based on the experience of the project manager consultants of Van Aetsveld.

The research holds four main variables namely: organizational culture, intervention, effectiveness, and project phase (see figure 1). Each of these variables is researched independently to provide a full picture at the end.

A restriction in this research is the point that the culture related interventions which are acquired are related to a certain organizational culture (one out of four). Therefore, this does not exclude the possibility that an intervention is effective as well in another culture. Since this research is exploratory and new on the topic, this restriction could be a suggestion for further research.
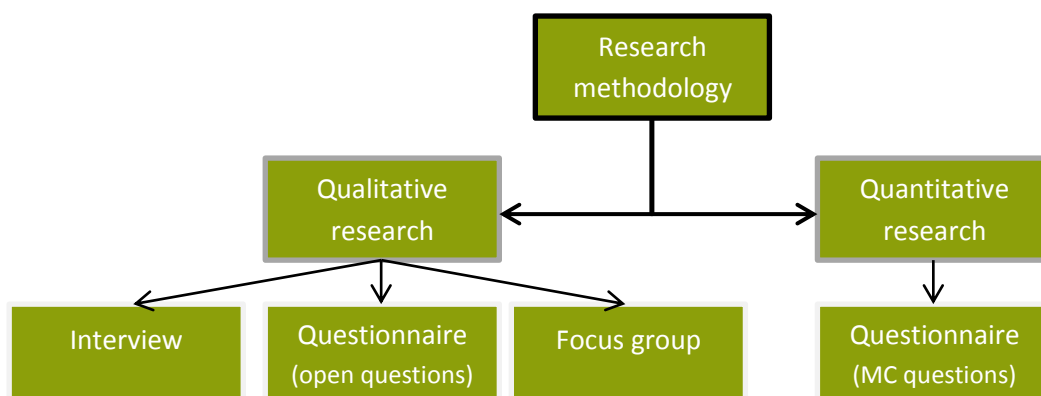

Figure 1 – research methodology

Report outline

The report will firstly discuss the target group of this research, followed by the research design which supports the reason of research. In the data collection the methods used will be explained. The data analysis will provide the reader with the variables and way of analyzing the data retrieved by qualitative and quantitative research methods. Chapter one presents the findings in two parts, firstly the general information followed by the intervention findings. The discussion interprets the result provided by chapter one. The last part of the report contains the recommendations for Van Aetsveld on the main research question and sub-questions.

Sampling

In this research the population consisted of consultants Van Aetsveld with project management experience (meaning that a person managed at least one project) numbering 47 consultants in total. To calculate the needed sample size a margin of error of 5% has been used with a 95% confidence level and a 50% respondent's level. This resulted in a needed sample size of 42 consultants with project management experience (Raosoft, 2004). This is achieved, 42 consultants of Van Aetsveld were able to finish the complete questionnaire. Therefore, it can be concluded that the sample size of this research is representative for the population. No sampling method has been used since it was possible to address the whole population; all the 47 consultants of Van Aetsveld received a personal email invitation to participate in the research. This resulted in 42 completed questionnaires since three consultants have ignored the invitation and two consultants were not able to fill in the questionnaire as they did not agree with the methods used.

Research design

This study is an example of a so-called interpretative paradigm research philosophy. Firstly, the assumptions of the research are viewed as incremental. Secondly, the assumptions about the literature are subjective. The combination of these two factors explains the interpretative paradigm. This paradigm represents

´People seem to hide behind the procedures from this hierarchical organization´ - project manager of Van Aetsveld about client

an understanding of organizations from the viewpoint of the actors (Burrell & Morgan, 1979). Moreover, the study is defined as a case study since it involves no study out of context (would be an experiment), partly theory in place (survey) and identifiable units. A case study involves empirical investigation in a real-life context, Van Aetsveld (Saunders, Lewis & Thornhill, 2009). This study represents an instrumental case study since it develops a tool which goes beyond the understanding of the theory (Heugens, 2002).

Data collection

Three different methods for data collection have been used, a questionnaire, interviews and focus groups, with each a different approach.

At first, a questionnaire was conducted. Three different approaches have been used to achieve the respondent of all the consultants with relevant project management experience. Firstly, an invitation was by sent email. In the email, a link was included which sent the receiver to the questionnaire made in Survey Monkey. After a week, a personal reminder mail was sent to those who did not fill out the questionnaire yet. The last approach was a telephone reminder after 3 days where a personal deadline was set by the respondent. The questionnaire consisted of 42 questions, combined

quantitative (24) and qualitative (18). On average it took a respondent 15 minutes to complete the questionnaire. Each respondent was asked to use their last finished project as context for filling out the questionnaire. The questionnaire has been divided in five sections: personal information, project information, interventions, organizational culture and closing. The questionnaire can be found in the appendix on page 26.

> 'Knowledge is power. But relations exceed power'. -project manager of Van Aetsveld

The second method of data collection consisted of a set of four interviews. The participants were invited via telephone for participation. The participants were all project managers from Van Aetsveld and who had cooperated in the previous questionnaire. The professionals were selected for two reasons; for the organizational culture type of their last planned project and the fact that they were still working at the used project organization of the questionnaire. The different organizational cultures were Hierarchy culture, Family culture and Market culture. The interviews were held in an informal setting at the client company itself or at Van Aetsveld and had an average time frame of 2.5 hours. The main goals of the interviews were to receive more information and gain depth about the interventions the person described in the questionnaire, the organizational culture of the organization, their experiences in other organizational cultures during their career and lastly to validate the data of the questionnaire. The interview questions were not exactly defined beforehand, instead the interview was structured by the main goals as described above. The interviews resulted in 5 new effective interventions including an organizational culture, project phase and target group.

Lastly, three focus groups were held. The first focus group was organized with the two board members of Van Aetsveld and two consultants who participated in a brainstorm session on organizational culture. The second focus group included consultants and associates from Van Aetsveld (kenniscafé), in total 35 individuals. The third group consisted of five professionals working as project manager at the University of Applied Sciences in Utrecht. In the focus groups, the group was informed about the research and the results so-far. The categories and the tool were presented and the group was asked about their opinion. For example if they could they use the tool and interventions during their work as project manager.

Organizational culture has been measured by the use of the questionnaire by a test re-test method. The respondent has been asked to answer two questions related to the organizational culture of a specific intervention, this is called a test re-test (Saunders, Lewis & Thornhill, 2009). The interventions have been received by the use of the questionnaire and during the interviews. Effectiveness and project phase have been linked to each interventions received by the questionnaire or during an interview depending on where the intervention was mentioned.

Data analysis

To analyze the data from the questionnaire Microsoft Excel was used. The interview data has been recorded and the important information has been summarized afterwards. The focus group was used mainly to validate the developed tool (for the tool see page 28).

The research contains four main variables namely: organizational culture, intervention, effectiveness and project phase. Each of these variables is researched independently to provide a complete picture at the end.

Organizational culture

The variable organizational culture has been measured by a test re-test in the questionnaire (Saunders, Lewis & Thornhill, 2009). Firstly, organizational culture has been measured by using eight characteristics for each of the four organizational culture types according to Cameron and Quinn (1999). The respondent was asked to choose a minimum of five characteristics out of a list of 32 that would represent the person's project environment. The organizational culture was chosen based on the highest number culture of related characteristics of one of the four cultures. When there was an equal outcome of two (or more) cultures the direct culture question was chosen as final culture (if present in the outcomes). The respondent was not informed that by choosing the characteristics an organizational culture was defined. Secondly, a direct question was asked, with the model of Cameron and Quinn's competing value model information provided, namely which organizational culture would have the best match with the persons project environment. The selected organizational culture of the characteristics is valued above the personally chosen organizational culture since bias could provide a wrong adjustment.

Interventions

It was assumed that consultants make use of interventions in their work as project manager. This assumption is confirmed during the research by all the consultants of Van Aetsveld. In the questionnaire the consultants were asked to write down two or three interventions which were used during the respondents last planned project. For each intervention it was requested what the interventions were about, how the intervention was executed, for whom and why it was executed. They have been grouped according to the 'why' answer. All the interventions have been put together and by categorizing them one by one groups appeared. The developed (sub-) categories are not based on literature but on the perspective of the researcher and company supervisor.

> 'I am always asking myself the question: how is the power distributed and located in an organization?' -project manager of Van Aetsveld

Effectiveness

To measure effectiveness a variable is needed, in this case the variable is the intervention described by Van Aetsveld in the questionnaire. Effectiveness has been measured by a test re-test (Saunders, Lewis & Thornhill, 2009). Firstly, a multiple choice (MC) question was asked whether the respondent would use the intervention again in another situation. Possible answers were restricted to yes and no. When the respondent chose 'no' an open text box appeared with the request for an explanation of the 'no' answer. Secondly, the respondent was asked directly if the described intervention supported the effectiveness of the project. The definition of effectiveness was provided, namely: 'doing the right things' (Ducker, 2006). The possible answers (MC) were 'yes, this intervention contributed to the effectiveness of the project', 'no, this intervention did not contribute to the effectiveness of the project' and 'I do not know'. All the respondents who answered yes to the first question ("would use this intervention again?") responded positively to the second effectiveness question. Three respondents answered that they would use the intervention again but answered 'do not know' on the question if the intervention supported the effectiveness of the project. These interventions were therefore excluded. Next to that three respondents answered twice negatively, these interventions were excluded as well from the research.

Project management / project phase

The life of a project can be defined in project phases, the project phases are of relevance in this study. The project phases used in this research are derived from PMBOK (1987) and defined as: initiating phase, execution phase and closing phase. For each intervention the respondent has been asked to select a phase when the described intervention was used. An extra option was provided when the intervention could be used during all phases. Furthermore the possibility was given to select multiple phases.

Limitations and further research

For this research four limitations are identified. The study focuses on interventions which are effective in a certain organizational culture. This does exclude the option that the intervention would not work in another organizational culture. Furthermore this case study may not be representative for the Dutch project management consultancy sector since the used sample is limited to 47 consultants and 84 interventions. Although the results could give indications for further research. This research involves a case study; the data has been received from one company which may cause a bias. Another limitation is time; a time frame of 20 weeks was applicable to this research. The outcomes of this research will be used by Ms L. de Faber, project manager at Van Aetsveld, for further research.

1. Findings

Through the performed questionnaire and held interviews 84 culture related interventions have been gathered which proved to increase project management effectiveness during a certain project phase. Firstly, the general information findings will be presented followed by the interventions with each variable[2] (effectiveness, project phase and organizational culture).

1.1 General information

1.1.1 Researched projects

The following results provide information about 41 researched projects used for this study. The results give a general picture of the type of projects performed by Van Aetsveld consultants. The projects focus is the last finished planned project executed by the consultant. The projects done by Van Aetsveld consultants are equally divided over five sectors, namely; 'retail and wholesale', 'Services', 'Governmental agencies', 'Finance, Insurance and Real Estate' and 'Transportation, Electricity, Gas and Cleaning' (Cameron & Quinn, 1999). In two sectors no researched projects took place, these sectors are 'Agriculture, Forestry, Fishing' and 'Construction firms'. Most projects have a known start and a known destination (54.8%). Furthermore most projects involve the second order of change which is the change of behavior (73.8%) (The Caluwé & Vermaak, 2003).

1.1.2 Knowledge of organizational culture by consultants

The following results give an indication about the knowledge and use of Van Aetsveld consultants about the theory of organizational culture. The majority of the consultants (47.6%) who use organizational culture models to support their work chose for the framework of competing values from Cameron and Quinn (1999). Another popular theory is the cultural onion model from Hofstede (2005), 31% of the consultants' state that they use this model. However 38.1% of the consultants do not make use of an organizational culture theory. 19% of the respondents chose for the option 'other', were some consultants' state that they do not believe in the use of models or use the change color theory developed by Caluwé and Vermaak (2003). Furthermore 30.9% is not well versed with the subject organizational culture.

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[2] The variable target group has been added later to categorize the interventions.

1.2. Interventions

The following chapter presents the findings of the interventions. Firstly the culture related intervention findings will be presented followed by the variables which are linked to each intervention. Examples of the interventions are listed in the appendix (p. 29). The interventions researched are structured in the following way, as shown in figure two.

Figure 2 – structure interventions

From the questionnaires and interviews 84 effective organizational culture related interventions (out of the 92 in total received interventions) are collected which increase project management effectiveness during a specific project phase. Three (main) categories are developed according to the purpose of the intervention namely; controlling interventions, connecting interventions and actuating interventions. Controlling interventions are there to receive more control over the project (resources). Management of time, money, people and quality belongs to this category. Connecting interventions goal is to connect people and thoughts. Actuating interventions are used to move people into a certain direction. Figure 3 shows the main categories of the interventions with the related subcategories.
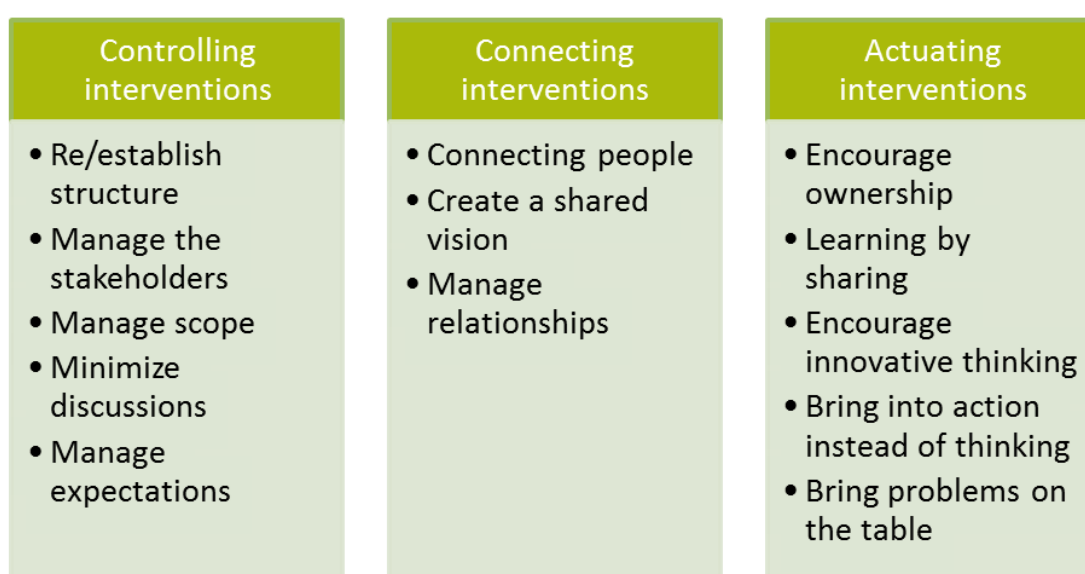

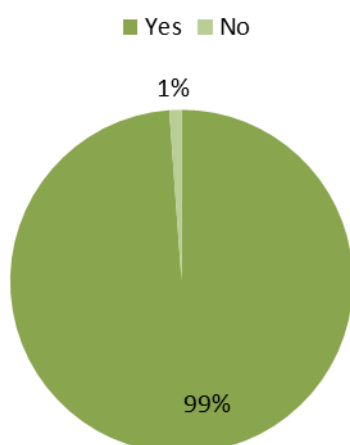Figure 3- (sub-) categories of interventions

1.2.1 Effectiveness

Effectiveness has been researched by a test re-test method, meaning that the method to test the variable effectiveness involved two questions in the questionnaire:

1) By asking if the professional would use the specific intervention again.

Would you use this intervention again?

■ Yes ■ No

1%

99%

Almost all (99%) participants answered that they would use the described intervention again. Only one participant responded 'no' and stated as reason that the project escalated after which he decided to stop his work at the project.

Figure 4 – Re-use of intervention

2) By asking a direct question to the respondent including the definition of effectiveness.

Most respondents believed that the used and described intervention has contributed to the effectiveness of the project (93%). A small percentage (3%) stated that the intervention did not contribute to the effectiveness of the project. The same percentage accounts for the percentage of respondents who do not know if the described intervention increased their project effectiveness.

Has this intervention contributed to the effectiveness of your project?

■ Yes ■ No ■ Do not know

4% 3%

93%

Figure 5 –intervention effectiveness
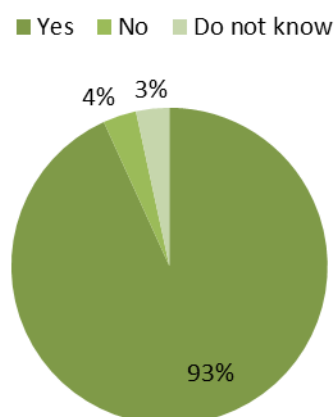
The direct question to measure effectiveness is seen as dominant.

Interventions which are described as not effective were not used further in the research.

1.2.2. Organizational culture

The organizational culture related interventions are defined by culture according to Cameron and Quinn (1999) the competing values framework. This framework defines four cultural types according to two variables; internal versus external focus and controlled versus flexible organization.

Figure 6 – Framework by of Cameron & Quinn (1999)

The variable organizational culture is determined in two ways in the survey;

1) By a direct question, with the theory of Cameron and Quinn (1999) presented: 'how would you define the organizational culture in your project environment?'. Possible answers were, according to the model: Family culture, Adhocracy culture, Hierarchy culture and Market culture.

2) By the selection of organizational culture related characteristics (according to Cameron & Quinn, 1999), with a minimum of five out of 32.
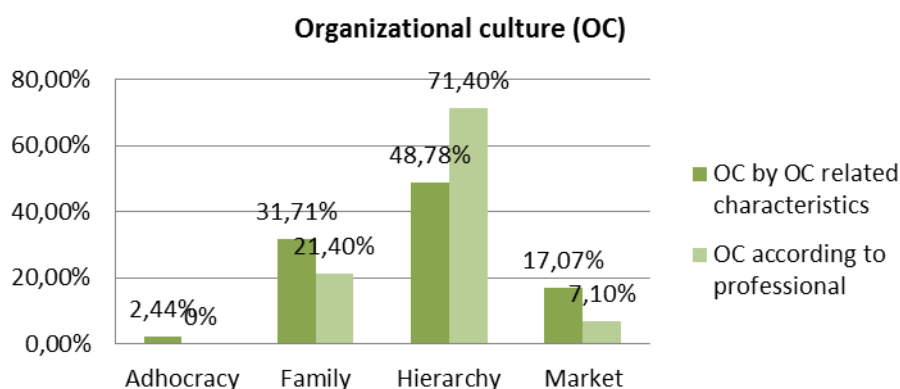

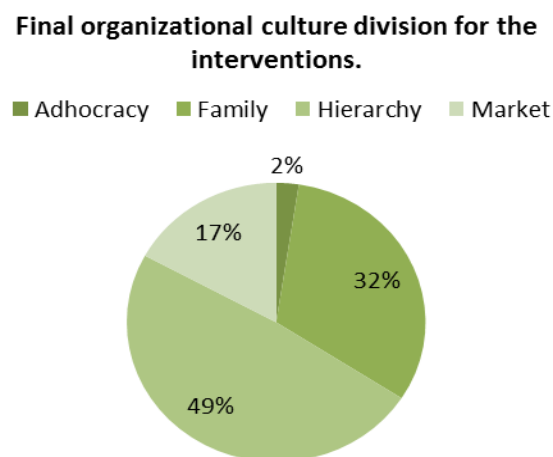Figure 7 (above) – organizational culture results

Figure 8 (right) – final organizational culture division results

Most consultants of Van Aetsveld work in a Family or Hierarchy oriented culture organization for their project. For Adhocracy and Market cultures there are only a few. Interestingly a difference exists in answers of the consultants by the two questions. The culture derived from the organizational culture related characteristics is taken as decisive since these characteristics are grounded by theory and minimizes bias. (See page 29 for the list of interventions according to organizational culture.) Furthermore, all the consultants who are interviewed agreed with the hypothesis that cultural related interventions can increase project management effectiveness.

1.2.3 Project phase

The project phase has been defined according to the division of project phases by PMBOK (1987). For this study three out of the five phases of PMBOK have been used plus one additional ('during the whole project'). This results in four phases as shown in figure 9.
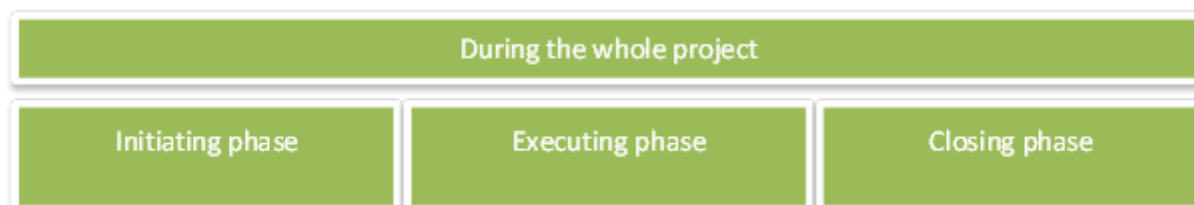

Figure 9 – project phases used in study.

From the surveys and interviews 95 interventions have been gained, 84 appeared to be effective and possible to categorize according to purpose.

|	Adhocracy	Family	Hierarchy	Market	Total
Initiating phase	0	9	9	4	22
Executing phase	2	10	23	7	42
Closing phase	0	0	8	0	8
During the whole project	0	9	8	6	23
Total	2	28	48	17	**95**

Table 1 – Division of number of interventions per project phase (PMBOK, 1987) and organizational culture (Cameron & Quinn 1999).

Table 1 provides an overview of the interventions gained after the data collection. On the horizontal axis the organizational culture types are cross-tabulated against the project phases (vertical axis). This results in an overview of the numbers of interventions per phase and organizational culture. Interestingly 44.2% of interventions are used during the executing phase of a project. Furthermore, the majority of the interventions took place in a Hierarchy culture. Only a few interventions were mentioned for the closing phase of a project.   Figure 10 – Target group results.

1.2.4 Target group

The majority of the interventions are used for a group (53.8%) followed by the organization (37.63%). Only a small percentage of the interventions focuses on the individual (8.6%).
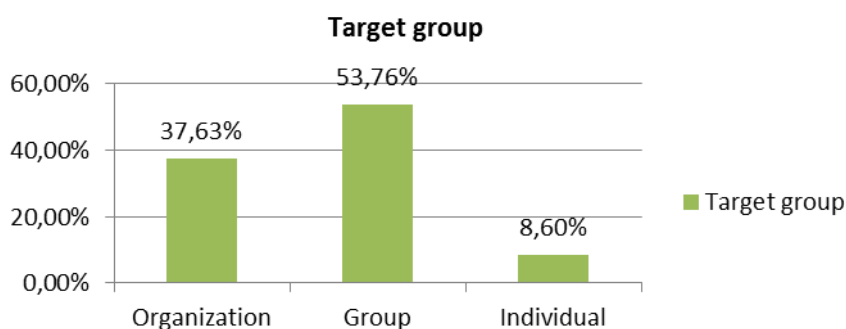
Discussion

This research has been carried out in order to find out which culture related interventions increase project management effectiveness. In this chapter the project results will be discussed. Firstly the project results will be discussed followed by the researched knowledge of organizational culture by consultants of Van Aetsveld. Lastly the intervention results with the connected variables, *effectiveness, organizational culture, project phase and focus group*, are discussed.

In general the researched projects of Van Aetsveld characterize themselves as planned ones, meaning projects with a clear start and known destination. This is explainable since most clients of Van Aetsveld will hire a consultant when they have a specific problem or project. However, since this brings along high costs, the recent economic crisis has impacted this aspect. This results in (more) carefully considered decisions, limited budgets and an increased need for stability by organizations. These factors also apply for the clients of Van Aetsveld. However, it is expected that these type of projects, planned projects from A to B, will remain the most common type of projects within Van Aetsveld.

Furthermore, results show that almost 40% of the consultants do not use the theory of organizational culture in practice. In addition, roughly 30% knows too little about this theme. Therefore the consultants of Van Aetsveld can be divided into four groups according to ´the four stages of learning´ by Maslow (Crosbie, 2005). One group obtains sufficient knowledge about organizational culture but is not using this knowledge in practice. According to Maslow this group is 'Unconscious Competence'. The second group knows too little about organizational culture and does not apply the concept during their work ('Conscious Incompetence'). The third group consists of consultants who are familiar with organizational culture and use this in their work ('Conscious Competence'). The fourth group exists out of consultants who are Unconscious Incompetence, therefore do not have the knowledge about organizational culture and do not use it. Ideally the group of conscious competence should dominate to increase project management effectiveness. Of the consultants who do use the theory of organizational culture, the majority makes use of the framework of Cameron & Quinn (1999). The latter has been an expected result and is therefore chosen as basis framework for this research.

During this research, 84 cultural related interventions have been identified which increase project management effectiveness. The interventions are categorized in three main groups (controlling, connecting and actuating interventions) with each contain certain sub-categories (see figure 3 p.14). Each intervention is linked to four variables: effectiveness, organizational culture, the project phase and the target group. Each of the variables and the outcomes will be discussed separately.

The majority of the interventions is perceived as effective and therefore used further in this research. The 'no' and 'do not know' effective interventions are not used further. Most consultants have described successful (effective) interventions. This could be an indication of socially desired biased responses. For this research this is an advantage since the goal is to receive effective (cultural related) interventions.

A large amount of projects of Van Aetsveld is positioned in Family and Hierarchy organizational cultures. According to Cameron and Quinn (1999) most large companies are found in a Hierarchy culture since the Hierarchy helps to control the complexity and quantity. Therefore the high percentage of Hierarchy culture for projects in Van Aetsveld is explainable, a large segment of the clients of Van Aetsveld are large companies (>250 employees (Newcronos, 2009). For instance: Ahold, Rabobank and Equens. The large Family culture oriented project environments are accountable by the number of projects done on the operational organizational level; for example, the Dutch Police, Youth care and ROC. Adhocracy oriented organizations are mostly start-ups and creative companies (Cameron and Quinn, 1999) which do not appear in the client portfolio of Van Aetsveld. Market culture organizations, like Ahold, are clients of Van Aetsveld. Although, Van Aetsveld is mainly executing tasks in the ICT departments of these organizations were a Hierarchy culture dominates in the project environment.

The difference between the selected culture by the consultant in the questionnaire and the organizational culture which is retrieved by selected characteristics could be accountable by the lack of organizational culture knowledge of some consultants (30.9%). However, there has been no correlation found between the consultants who are unfamiliar with organizational culture and not matching answers of the test re-test. The point that the sample group is relatively small could be another explanation.

Most interventions belong to the executing phase of the four project phases. This phase consists simply of the (mostly) longest timeframe and thus the largest to intervene. The closing phase obtains the lowest number of interventions. A possible explanation, confirmed by two Van Aetsveld consultants, is that during the closing phase no big surprises are likely to show up. The closing phase can be seen as the most stable phase.

The majority of the interventions focus on a group of people. A project manager is often responsible for a certain project which involves a project team. This project team is considered as a group of people and therefore logically chosen as largest target group.

The start point for this research was that organizational culture has influence on the project result and therefore project management. Therefore, it is important for the consultants to be consciously aware of the organizational culture in the project environment in order to increase project management effectiveness. This can be done by using the right organizational culture related interventions which have proved to be effective in a certain organizational culture. It would for instance be useful for consultants to help in deciding and finding the right interventions which are effective in an organizational culture with the help of a tool.

'It is fun to work in a Hierarchy dominated organizational culture. During the lunch break we used to go out for a short walk with the Van Aetsveld consultants working for that organization at that time. That gave us the opportunity to discuss problems together and share important information'. -project manager of Van Aetsveld about client organization.

Recommendations

Which organizational culture related intervention increase project management effectiveness? This was the main question for the start of this research. 84 culture related interventions have been explored which increase project management effectiveness in a certain organizational culture defined by Cameron & Quinn (1999). The interventions are linked to a certain project phase, derived from PMBOK (1987), and a target group. The interventions are listed on page 27. A cost overview can be found in appendix 5 (p.29). In this chapter, two recommendations are provided for Van Aetsveld.

1. Van Aetsveld should increase the knowledge of the consultants about organizational culture in order to increase project management effectiveness.

The performed research results showed that 38.1% of the consultants do not use the theory of organizational culture during their work. Next to that 30.9% seems unfamiliar with the theme organizational culture. This is something Van Aetsveld should consider working on since literature substantiates that organizational culture could lead to an increase of organizational effectiveness. It is advisable for Van Aetsveld to pay attention to two main groups of consultants; those who are an ´Unconscious Competent´ and a ´Conscious Incompetent´ of organizational culture.

    A. Unconscious Competent: it would be beneficial if this group becomes aware of the fact that conscious awareness of organizational culture can increase project management effectiveness.

    B. Conscious Incompetent: it would be beneficial if this group receives information in order to increase knowledge about organizational culture. This information will be applicable to their work as a project manager.

The goal is that the consultants will each become a Conscious Competent since organizational culture is influential on the project result and therefore project management. This can be done by organizing so called 'pizza sessions' to increase knowledge. Awareness can be created on the online Yammer site (internal social network) of Van Aetsveld. It is believed that keeping the organizational culture in mind when working as a consultant for an external client has benefits. The hypothesis that the right organizational culture related interventions can increase project management effectiveness has been confirmed by the interviewed professionals of Van Aetsveld. Additionally, the majority of the projects executed by Van Aetsveld consultants focus on change in behavior. This outcome creates opportunities for organizational culture aware project management, since organizational culture strongly links to behavior.

2. Van Aetsveld should make the interventions practical by the use of an interactive tool

This list of culture related interventions received by this research has been made available for the consultants of Van Aetsveld by the use of an interactive tool, namely ´the cultural aware project management tool´. This is an example of how Van Aetsveld could use the results, the interventions, of this research. Appendix 3 (p. 28) presents the tool graphically and appendix 4 provides a user guide of the tool (p.29).

The tool can have several functions and options:

- The tool can *guide* the consultant through a list of interventions which have been proven to be effective in a certain organizational culture, within a project phase and category.

- The tool can have a second function, namely, a *knowledge database*. Besides starting the tool from an organizational culture perspective, other starting points could be possible as well. For example to start from project phases or the categories.

- The tool can help *breaking myths* in project management (Rorije, 2010).

- The tool *can stimulate a learning process* by learning from interventions used by colleagues.

- Since Van Aetsveld is a commercial organization, the tool can be used as *a (new) product*. For example, Van Aetsveld can provide the right consultant for the right project who takes the organizational culture into account; culture aware project management.

Currently, the tool has been created in PowerPoint. Although this is effective for now, it is advisable to professionalize the tool in a certified database or website format. Maintenance is high in PowerPoint and mistakes can be made quickly with all the different hyperlinks. To use the program Prezi is not an option since it is not interactive, the user has to be able to make decisions (in phase, culture etc.). ´Microsoft Access´ would be a good option since its aim is to create databases (Microsoft, 2012).

When the right database is made, the tool can be upgraded with the use of 'like' buttons from which a 'top 10-list', 'most used intervention list' and 'most liked intervention list' can be created. Additionally a comment box could be added were users can insert comments about a certain intervention for which the administrator can take care of. The administrator should be appointed to conduct basic maintenance on the tool. Recommended is to appoint Laura de Faber for this position since she followed the whole process closely. Tasks could be to add new interventions, delete old or too specific ones and to add new information to existing interventions.

'Van Aetsveld does not have something like an intervention tool yet like you want to develop. I believe that would be of great value to our organization, we can learn a lot from each other' -project manager of Van Aetsveld

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Appendix 1 – Questionnaire

This questionnaire has been used during the research. In total 42 consultants, with project management experience, from Van Aetsveld have filled in the questionnaire. Note: only the questions are mentioned and translated to English. The original questionnaire was executed by the use of the online survey tool 'Survey Monkey' and accessible via: https://www.surveymonkey.com/s/YXR8T93

1. Do you have project management experience? (you managed at least one project)
   A. Yes
   B. No
2. What is the name of the organization were you executed your last finished and planned project? (if you worked for multiple organizations during that particular project, please select one).
3. What is the name of the department were you worked during that project? (if you worked on multiple departments, please select one).
4. What was the name of the project?
5. How would you typify the project?
   A. From a known start to a known destination (from A to B)
   B. From a known start to an unknown destination (from A to something)
   C. From an unknown start to an unknown destination (from something to something)
6. What kind of result was required?
   A. Change on paper: change the task descriptions of the employees, processes stay the same (first level of change)
   B. Change in behavior: the way people do their work changes, processes change (second level of change)
   C. Change in thinking: the way people think about themselves and the organization changes (third level of change)
   D. Other (please explain)
7. Select the most applicable characteristics of your project environment (at least five).

Family culture	*Adhocracy culture*
Personal character	Dynamic
Big family	Entrepreneurship minded
Team work	Risk taking
participation	Innovative
loyalty	Freedom
human development	Involved by development and innovation
Trust	First mover
openness	Creating new challenges
Market culture	*Hierarchy culture*
Result oriented	Strict controlled and structured
Competitive	Predictable
No-nonsense attitude	stable relationships
Aggressive	certainty
High demanding	conservative
achievement oriented	Formal rules and procedures
Ambitious goals	manageability
competitive market leadership	Efficiency

8. Which intervention did you use during that particular project? (Describe one)
9. How did you use this intervention?

10. Why did you use this intervention?
11. For which (most important) target group was this intervention mend?
    A. For an organization
    B. For a group
    C. For an individual
12. In which project phase did you use this intervention?
    A. In the initiation phase
    B. In the executing phase
    C. In the closing phase
    D. During the whole project
13. Was the intervention included in your project proposal?
    A. Yes
    B. No
14. Would you use the intervention again?
    A. Yes
    B. No
15. Explain why you would not use the intervention again. (if no on q.14)
16. Did this intervention contribute to the effectiveness of the project? (Effectiveness = doing the right thing, quality)
    A. Yes, the quality of the project increased with the use of this intervention
    B. No, the quality did not increase with the use of this intervention
    C. I do not know
17. Name a second intervention which you used during the project. (note: it must be the same project).
18. How did you use this intervention?
19. Why did you use this intervention?
20. For which (most important) target group was this intervention mend?
    A. For an organization
    B. For a group
    C. For an individual
21. In which project phase did you use this intervention?
    A. In the initiation phase
    B. In the executing phase
    C. In the closing phase
    D. During the whole project
22. Was the intervention included in your project proposal?
    A. Yes
    B. No
23. Would you use the intervention again?
    A. Yes
    B. No
24. Explain why you would not use the intervention again. (if no on q.14)
    A. Did this intervention contribute to the effectiveness of the project? (Effectiveness = doing the right thing, quality)
    B. Yes, the quality of the project increased with the use of this intervention
    C. No, the quality did not increase with the use of this intervention
    D. I do not know
25. Would you like to describe another third intervention?
    A. Yes (Repeat q. 17-24)
    B. No
35. How well known are you with organizational culture? (Liker scale)
    1. Not known
    2.
    3.
    4. Very well known

36. Which organizational culture models/frameworks do you use?
    A. Cameron & Quinn (1999); "Organizational culture assessment instrument (OCAI)" - (I.E. Family, Market, Hierarchy culture etc.)
    B. Hofstede (2005); "the Hofstede dimensions" - (Bv. Power distance, individualism etc.)
    C. Hofstede (2005); The onion model - (I.E. Rituals, values and hero´s etc.)
    D. Schein (2004); three levels of culture - (I.E. Values and artifacts)
    E. Sanders & Neuijen (1999); "the six dimensions" - (I.E. Process v.s. result oriented)
    F. none
    G. Other(s), namely:
37. How would you classify the organizational culture in your project environment? (explainable model of culture types and information available)
    A. Family culture
    B. Adhocracy culture
    C. Market culture
    D. Hierarchy culture
38. Which elements of the selected culture above worked for and/or against you during the project? Please explain your answer.
39. Do you still work for or in this organization?
40. What type of project manager are you? (explanation available)
    A. The operational project manager.
    B. The change project manager
    C. The cooperative project manager
    D. The strategic project manager
41. What is your name? (Note: your answers will stay anonymous)
42. Feedback. Feedback and tips are welcome.

Appendix 2 – Interventions per culture

Below examples of the gathered effective interventions are listed according to culture type. The connected variables (project phase, target group and (sub-) category are presented with each intervention. Note: the interventions are in Dutch since the data is gained in Dutch. In order to keep the data as original and valuable as possible they were not translated into English to prevent bias. The full list of interventions can be received by contacting the researcher on agreement of the researched organization, Van Aetsveld.

Below the abbreviation of the intervention variables are explained which match with the intervention tables presented.

Category

ACT	Actuating
CONN	Connecting
CONT	Controlling

Sub- Category

CP	Connect people
CAV	create a shared vision
MR	Manage relationships
MS	Manage scope
MD	Minimalize discussions
RS	Re/establish structure
MTS	Manage the Stakeholders
BA	Bring in action in stand of thinking
BOT	Bring problems on the table
EIT	Encourage Innovative thinking
LBS	Learning by sharing
EO	Establish ownership
ME	Manage expectations

Target group

1	Individual
2	Group
3	Organization

Culture

1	Family culture
2	Adhocracy culture
3	Market culture
4	Hierarchy culture

Project phase

1	Initiating phase
2	Executing phase
3	Closing phase
4	During the whole project

Effectiveness

1	Yes
2	No
3	Do not know

Example of family culture interventions

Table 2 – Intervention 1 family culture

Category	Sub-category	Resp. nr	Culture	Phase	Effectiveness	Target group	What	How	Why
ACT	EIT	27	1	1	yes	2	Interactieve sessie voor medewerkers zodat zij zelf richting geven aan de ontwikkeling van vernieuwing van hun core business. Bottom up, eigen verantwoordelijkheid, procesbegeleiding indien gewenst, pak je kans als je richting wilt geven zijn steekwoorden.	Eerst de medewerkers out of the box te laten denken wat zij idealiter willen bereiken/ voor elkaar willen krijgen in een tijdsbestek van twee jaar. De tweede ronde gaat om in hoeverre je hierbij betrokken of verantwoordelijk voor wilt zijn. De derde ronde is het bedenken wat je ervoor nodig hebt om dit te bereiken (middelen. verantwoordelijkheid, sparren, ruggensteun etc.). De vierde ronde is het terugkoppelen van deze informatie aan de leidinggevenden en de organisatie.	Omdat de medewerkers teveel gewend zijn om volgens een vaste manier te werken, die niets bijdraagt aan de ontwikkeling van hun core business. Dit moet doorbroken worden. Evenals dat men daar invloed op kan uitoefenen is geen normale gang van zaken, maar wordt nu wel van hun verwacht, op dit thema.1

Table 3 – intervention 2 family culture

								Themavoorbereiding; brown papersessie om ideeën te genereren; bundelen van de ideeën naar fase in het project; kiezen van	Om betrokkenheid te krijgen van de deelnemers en 'iets van henzelf in het project te
ACT	EO	22	1	1,2	yes	2	Brainstormsessie voor het betrekken van projectparticipanten.	uit te werken ideeën.	krijgen'.

These two family culture oriented interventions are both actuating interventions. Table 2 provides an intervention in the ´encourage innovative thinking´ sub-category in the initiation phase for a group. Table 3 shows an intervention of the 'encourage ownership' sub-category which can be used in the initiation ánd executing phase of a project. The target group for this intervention is a group.

Example of Hierarchy culture interventions

Table 3 – intervention 1 Hierarchy culture

Category	Sub-category	Resp. nr	Culture	Phase	Effectiveness	Target group	What	How	Why
CONT	MS	38	4	1	yes	3	Bewust de macht in kaart brengen.	Wees er bewust van en stel de vraag (aan jezelf): hoe zit het hier met de macht? En wat voor een effect heeft dat op het project en het project op de verandering.	Verhoudingen in de organisatie kunnen heel bepalend zijn en van (grote) invloed op je project.

Table 3 – intervention 1 Hierarchy culture

CONT	MTS	25	4	1	yes	3	Het verschuiven van het opdrachtgever schap van de ene partij naar de verantwoordelijke partij.	Aangeven aan de ene partij dat de opdrachtgever schap over gegeven moet worden omdat het niet in zijn rol past. Verantwoordelijke partij vragen of hij dat deel wilt mee nemen in de stuurgroep.	Zorgdragen voor eigenaarschap van de opdracht bij de verantwoordelijke en niet bij de sterkste belanghebbende.

Table 4 – intervention 2 Hierarchy culture

The two interventions from table 3 and 4, controlling interventions, both focus on an organization. The intervention from table 3, locate the power in an organization, belongs to the sub-category to manage scope. The intervention from table 4, move the ownership from one to another responsible party, belongs to the sub-category to manage the stakeholders.

Example of Market culture interventions

Category	Sub-category	Resp. nr	Culture	Phase	Effectiveness	Target group	What	How	Why
CONT	MD	26	3	1	yes	2	Voorbeeld: '2 personen aangewezen (vanuit een groep van 10) die acceptabel waren voor mij (en ook voor de anderen) om inhoudelijk "het geweten" te zijn".	Door in de individuele gesprekken te polsen hoe de verhoudingen zijn en de kennis op inhoudelijk gebied. Vervolgens in de plenaire sessie hen als zodanig positioneren.	Om discussies met 10 personen te voorkomen.
CONN	CP	29	3	4	yes	2	Team shuffelen dat mensen samen moeten werken met "andersdenkenden".	Een aparte ruimte regelen en die op een andere manier ingericht. Teamleden daarmee uit hun comfortzone gehaald. Iedere week teamoverleg, waarin de andere kant van denken centraal staat.	Een team creëren dat niet acteert als een team.

Table 5 – Intervention 1 and 2 Market culture

The above interventions have shown to be effective in a market culture. Both interventions focus on a group. The interventions are categorized in the 'controlling' and 'connecting' category. The sub-categories are 'minimize discussion', results are important in this culture, and 'connect people'.

Example of Adhocracy culture interventions

Category	Sub-category	Resp. nr	Culture	Phase	Effectiveness	Target group	What	How	Why
ACT	EO	8	2	2	yes	2	Voorlichtingsbijeenkomst voor intake medewerkers	Interactieve presentatie waar ook een spel in voorkomt en een discussie.	Om de medewerkers bewust te maken van hun rol in het proces, het belang van bepaalde handelingen en hun betekenis voor de kwaliteit daarvan.
ACT	EO	8	2	2	yes	2	Workshops om requirements op te stellen en processen te ontwerpen.	Diverse stakeholders bij elkaar in een vergaderzaal voor overleg.	Omdat het belangrijk is dat verschillende stakeholders het resultaat zouden onderschrijven en in hun eigen organisatieonderdeel zouden verdedigen en ondersteunen.

Table 6 – Intervention 1 and 2 Adhocracy culture

Above two interventions are described which have proven to be effective in an Adhocracy culture. The interventions are both located as actuating interventions categorized to the 'establish ownership' sub-category. Furthermore, they both serve a group as target group.

Appendix 3 – Interactive Tool Cultural Aware Project Management
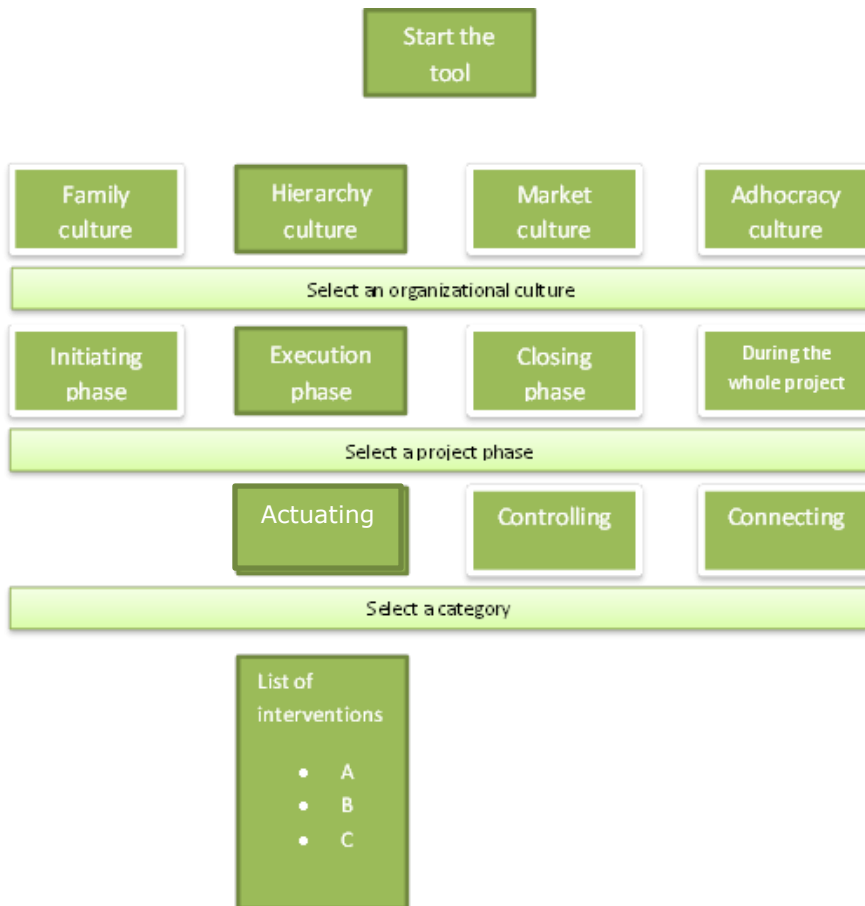
Figure X – Tool cultural aware project management

At the start of the tool the consultant has to make a selection of an organizational culture. Secondly, a project phase must be selected. Lastly, the project manager can choose a category in order to find the right organizational culture related intervention. Now a list with effective culture related interventions will appear based on the made selections. It is also possible to go back in the selection process.

Appendix 4 – User guide Tool Cultural Aware Project Management

This user guide has been developed for the consultants of Van Aetsveld. Therefore the guide is written in Dutch but translated to English for this document.

User guide tool cultural aware project management – General information

Goal of the tool:
The cultural aware project management tool has as its goal to increase the effectiveness of your project by using organizational culture related interventions. Additionally, the tool gives idea's for the use of (other) interventions that you are normally used to and can break the 'project myth'.

When can I use the tool?
You can use the cultural aware project management tool in all situations. The tool is divided in cultural types, project phase, subject and target group.

For who is the tool meant?
The cultural aware project management tool is meant for project managers.

Where can I find the tool?
You can find the tool in the VAwiki under the topic 'cultuurbewust projectmanagement'.

If I have a question, who can I contact?
For questions you can contact Laura de Faber.
Mail: laura.de.faber@aetsveld.nl
Phone: 06 233 67 021

1. Start.
You can start the tool by selecting the logo of Van Aetsveld.

2. The following screen will appear:

3. Here you can select a culture by clicking on the right square. Do you wish to gain some information about a particular culture? Please select 'info' under the culture name.

3.1 If you selected the 'info' button, the following screen will appear (depending on your culture selection). For example family culture:

3.2 In this section the characteristics of the selected culture are described. The characteristics are derived from the theory of Cameron & Quinn (1999). Would you like to go back to the culture overview? Please click the button ' 'terug naar cultuur' (step 2).

Select a culture.

4. According to the selected culture the following screen will appear:

In this case family culture. The next step is to select a project phase. The blocks with white tekst are available for selection. The grey text is not yet available.

5. If you selected a project phase the next decision is to select a subject:

There are three possibilities :
- Controlling: Manage your project scope,
- Actuating: Bring (people) in movement,
- connecting: Connect people and thoughts.
Select one of these subjects.

6. After selecting the subject for which you wish to find an intervention, the following screen will appear:

For each intervention it is described what it contains and why you can use the intervention. The column 'wie' (who) provides information according to the target group. There exist three possibilities:
- ORG = organization
- GR = group
- INDIV = individual

7. The last column shows an 'info' sign. Here you can find more information about a certain intervention.

At the bottom of the page there are blocks with 'cultuur' (culture), 'fase' (phase) and 'onderwerp' (subject). These blocks can be selected and bring you back to the main page (culture, phase and/or subject selection). The culture were which you selected in the tool is shown on the right bottom side.

Appendix 5 – Cost overview recommendations

Table 7 provides an possible overview to train the consultants. The internal network (Yammer) can be used to post information such as articles and research. Another possibility would be to organize so called 'pizza sessions' to inform about organizational culture and brainstorm about commercial activities.

Table 7 – costs for training the consultants per month in Euro's

The cost of training the consultants to become Conscious Competent (per month in Euro's)					
Action	Product	Price	Personnel hour	Hourly rate	Total
Inform consultants on the internal network of VA	Yammer	0	1	45	45
Organize a 'pizza' session for consultants of VA	Pizza session	0	3	45	135
				Total	180

Table 8 provides an overview of the cost of the developing the interactive tool in order to make the interventions practical to the users. The cost will consist the hours of development since the program (MS Access) is already available to the developer.

Table 8 – Cost overview of developing an interactive tool in Euro's

Developing an interactive intervention tool					
Action	Product	Price	Personnel hour	Hourly rate	Total
Developing tool in Microsoft Access	-	-	30	45	1.350
				Total	1.350