Design and validation of an organizational climate measurement tool

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Design and Validation of an Organizational Climate Measurement Tool

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I. Abstract

This study aims to develop an organizational climate measurement tool for the purpose of a quick scan of organization. The study combined recent findings about organizational climate theory from academic literature with the currently used diagnostic techniques within Hay Group Netherlands. The new developed measurement tool is validated through a survey among the employees of Hay Group. After its validation the refinement of its structure and constructs is performed. Finally, a set of interventions which are focused on organizational climate improvement within a particular organization and an implementation plan for organizational climate change are discussed. The study finishes with a number of conclusions, limitations and recommendations for further research and use of the tool.

II. Summary

The goal of this study is to develop a measurement tool for a quick scan of organizational climate. To achieve this goal, first, a literature study about organizational climate and its measurement approaches in the academic literature was performed. It resulted into the climate dimensions matrix which reflected all possible dimensions of organizational climate. Another step was done to make an inventory of the currently used diagnostic tools within Hay Group in order to obtain general guidelines for measurement tool's compliance with the main work practices within Hay Group.

The definition of organizational climate used in the study was: "The employees' common shared perceptions about their work environment on one of the levels of a particular organization, department, work group or individual employee". This study provided a practical example of how a new measure for organizational climate can be developed and validated within the organization. Development of organizational climate measure was an iterative process which started with the literature review of the latest academic studies of organizational climate construct. It resulted in the development of the new conceptual model for organizational climate. Its purpose was to reflect the position of organizational climate among other constructs and its influence on some particular performance outcomes. The model has shown that such constructs as mission and vision and organizational culture have a certain influence on the organizational climate. It, in its turn, results in performance outcomes such as innovation, motivation, job satisfaction and performance. The connection between organizational climate and certain performance outcomes was derived from various scientific studies found during the literature review and underlined the importance of developing a good reliable measure for the organizational climate construct.

Apart from the conceptual model, two important scientific findings formed the theoretical basis for the following study. One finding concerned the theory about the Competing Values Framework of Quinn and McGrath (1985). It includes empirical analysis of organizational effectiveness criteria, describing four different quadrants where any organization can work and operate effectively. These quadrants were: Human Relations, Internal Processes, Rational Goal and Open Systems.

The CVF four quadrants describe different valued outcomes and define effective organizational performance and means through which they are likely to be obtained. Each quadrant represents a set of valued outcomes and coherent managerial ideology about how to attain them. Taken together, the quadrants map out the major shifts that have occurred in both managerial ideologies and organizational theorizing over time. The model does not propose that organizations can be located predominantly in one of the four quadrants, but because every organization is a complex structure it will be active and will have its influence with different strengths in each of these domains (Quinn & McGrath, 1985). A balance of competing organizational values is required for organizational growth and development.

Another study by Patterson et al (2005) presents a multidimensional measurement instrument of organizational climate, Organizational Climate Measure (OCM), based on the Competing Values Framework (CVF) model of Quinn & McGrath (1985). In order to come up with an effective and

validated instrument it was important to be able to identify the underlying climate dimensions. The chosen dimensions were derived by the authors from the most frequently used research studies and were classified according to four quadrants presented in the CVF. The dimensions selection process resulted into 17 dimensions, divided into four quadrants: Human Relations, Internal Process, Open Systems and Rational Goal. The following instrument can be seen as one of the good examples the organizational climate measurement tools. It assists in establishing further connection between organizational climate and other performance outcomes.

Thus, combining the findings of Patterson's et al (2005) study about organizational climate dimensions with dimensions found in the other academic sources a list of 25 organizational climate dimensions was constructed. Each of the dimensions was attributed to one of the CVF quadrants in compliance with the characteristics of the quadrant described by Quinn and McGrath (1985). See Table 1 for the visual presentation.

Table 1. Organizational climate dimensions within CVF quadrant

Human Relations Quadrant	**Open System Quadrant**
Autonomy Integration/Information sharing Involvement/Participation Training/Self-Expression Management Support Welfare	Flexibility Outward Focus Reflexivity Job Challenge
Internal Process Quadrant	**Rational Goal Quadrant**
Formalization/Rules orientation Tradition	Organizational clarity Efficiency Effort Pressure to Produce Quality Performance feedback

Furthermore, it was decided that even though an organization primarily operates in one of the CVF quadrants, it always contains characteristics of each of the quadrants. Therefore, previously chosen 25 organizational climate dimensions were divided into two groups: *core* and *elective* one. It implies that core dimensions will always be taken into account when the tool will be used and depending on the type of the gap between the current and desired CVF quadrant whether organization is located a set of electives dimensions can be chosen. This tool's set-up will allow to react flexible on the current needs of the specific company.

In the next phase of this study the new developed organizational climate measurement tool was validated within Hay Group. In order to perform the validation of the new tool the survey with 130 questions was disseminated within Hay Group. The final reached sample size of the respondents who filled in the organizational climate survey was 90 people from expected total number of 180 Hay Group's employees.

First, the obtained data form the surveys was checked for the outliers and missing values, preparing it for the further validation procedure. Afterwards, the validation process of refinement of the whole structure of the organizational climate survey was performed. *Organizational climate tool's refinement* is an iterative process that consists of several steps. First, reliability analysis for each climate dimension was conducted. All climate dimensions that have Cronbach Alpha values below 0,5 were not considered for the further analysis. Secondly, correlations between the items within each climate dimension and inter correlations between the dimensions within each of the four CVF were examined. The correlations values should be in the range of [0,3 – 0,8]. In the third step the factor structure of the items within each of the CVF quadrants was checked. In order to reveal the factor structure, first Exploratory Factor Analysis (EFA) was conducted. Two main criteria were taken into account based on which an item was deleted or considered for the further research (Hair et al. 2006):

- Factor loadings should be more than 0,4;
- There should be no cross-loadings on the same factor with the values more than 0,4.

Finally, based on the results of the EFA, Confirmatory Factor Analysis (CFA) was conducted, that allowed to verify the factor structure found in the EFA by means of deleting or unifying two or more of the items. CFA represents the last criteria for the structural refinement of the organizational climate measurement tool. These four steps represent an iterative refinement process of the new organizational climate measurement tool. Moreover, four detailed examples of the validation procedure of climate dimensions from each of the CVF quadrants were described in this study. Finally, a detailed example from Hay Group of how the tool can actually be used in practice is discussed.

The next phase of this study dealt with the design of interventions for organizational climate change. First, a summary of interventions for organizational climate change within every CVF quadrant was given as the guideline if the organization is willing to move to a particular CVF quadrant. Secondly, a specific example of the possible interventions' scenarios for the implementation of the organizational climate change within Hay Group was discussed. It is based on the results of the conclusions from the statistical analyses and the output of gap analysis obtained after the validation of the organizational climate measurement tool within Hay Group. The set of interventions can be used by the management of Hay Group as a guideline for implementing organizational climate change within particular CVF.

Furthermore, the implementation plan of organizational climate change is discussed, which is essential for effective usage of the results from the organizational climate tool. The process of organizational climate change is a rather long and complex activity that implies changes in the employees' perceptions of their work environment and organization as a whole. Therefore, it is necessary to avoid that employees would perceive the management initiative for climate change as an intention of managers to perform even more strict control upon their work or performance results. Climate change process in this situation is a way to help employees and the organization in general to work better and more efficiently, where manager has the responsibility to facilitate and enable change. Thus, in this part of the study first change management principled are discussed and evaluated. Secondly, some general guidelines for the implementation of the organizational climate change process and bringing it into progress on the fictive example of Hay Group are discussed.

The study finished with a set of conclusions, discussing the achieved results. One of the main outcomes was a Climate Dimensions Matrix (see Table 4.4). It provided a summary of the climate dimensions that could be used for the measurement of the organizational climate and incorporated into the tool depending on the specific needs of the company. Thus, the structure of *core* and *elective* dimensions was introduced providing the end users of the tool with more flexibility in its usage. Another outcome was a detailed set of guidelines of how a new diagnostic tool can be efficiently used and incorporated into the consultants' practices. In Appendix 8 a table of contents of the Technical Manual for the new organizational climate diagnostic tool can be found. It was prepared for the internal use of Hay Group as a detailed guideline for the consultants who would like to use the new diagnostic tool in their work with the clients.

Furthermore, advantages of the new tool are discussed. One of the most important advantages concerned its ability to perform a quick scan of the organizational climate situation within relatively short time. It would provide an extensive gap analysis indicating the directions for the further interventions and improvement within organization.

The study's main limitations were found in a small and homogeneous sample size of Hay Group's employees that was used for the validation of the measurement tool. Furthermore, relatively short time of the project was considered to be an important limitation in this study.

Finally, a list of recommendations for the further research and for the tool's practical use for Hay Group was given. It was recommended to investigate in more detail the connection between the organizational climate and its outcomes. Hay Group was advised to implement the new organizational climate measurement tool in various organizational environments to be able to refine its structure in terms of climate dimensions within every CVF quadrant.

III. Preface

This report is the result of my Master Thesis research, as final part of the program Operations Management and Logistics at the department of Technology Management from the Eindhoven University of Technology.

The research focused upon the design and validation of an organizational climate measurement tool, which can be used as a quick scan diagnostic instrument for organizational climate within any organization. My personal interest in this topic is the possibility to combine the knowledge of the operations management and organizational science with human aspects of management process. During this research the main aim was to investigate the role of organizational climate and its impact on the organization and to develop a good reliable instrument for its diagnosis.

The completion of this project would not have been possible without the help of several people. First, I would like to thank all my collegues and supervisors from Hay Group, Hein Wendt and Harm van Vijfeiken for their support and input during my research and for providing me with the opportunity to conduct my Master Thesis project at Hay Group in Zeist for the last 6 months. You made my stay at Hay Group a very valuable learning experience.

Moreover, I would like to express a special thank to my supervisors from the Technical University of Eindhoven. First, I would like to thank Ad Kleingeld for his support during the project as the first supervisor. His valuable and often very quick feedback always provided new uselful insights that enabled me to finish this project. Secondly, I appreciate Ad de Jong for his critical review of this report and useful remarks in terms of methodology and statistical techniques used in this project.

Finally, I would like to thank my parents for all their support during my master study in the Netherlands and to my fellow students and friends for the pleasant time during the last two years in Eindhoven.

Andrii Dvortsov

Zeist, August 2008

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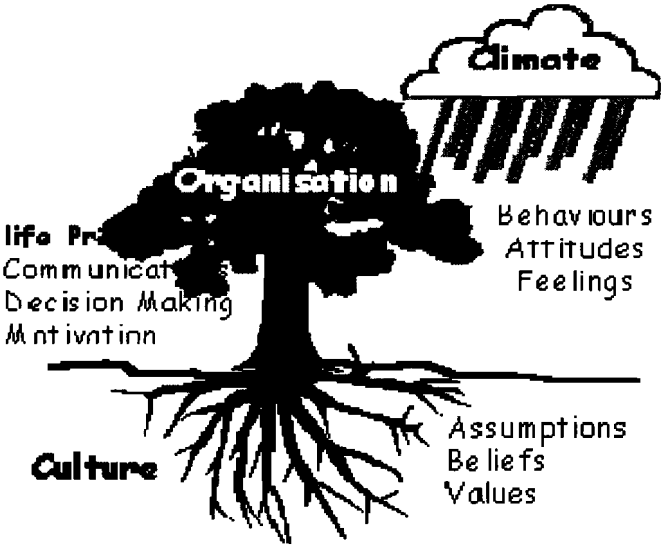
Chapter 1: Introduction and Structure of the Study

1.1. Problem statement

This master thesis graduation project aims to develop a new measurement tool for organizational climate assessment. It is conducted in the organization Hay Group Netherlands. During its development the latest notions of the academic literature and already existing diagnostic tools and practices of the organizational climate assessment from the Hay Group's experience will be incorporated for the development of the new organizational climate measurement tool.

A general graphical presentation of the organizational climate construct can be found in the Figure 1.1.

Figure 1.1. The Role of Organizational Climate within Organization



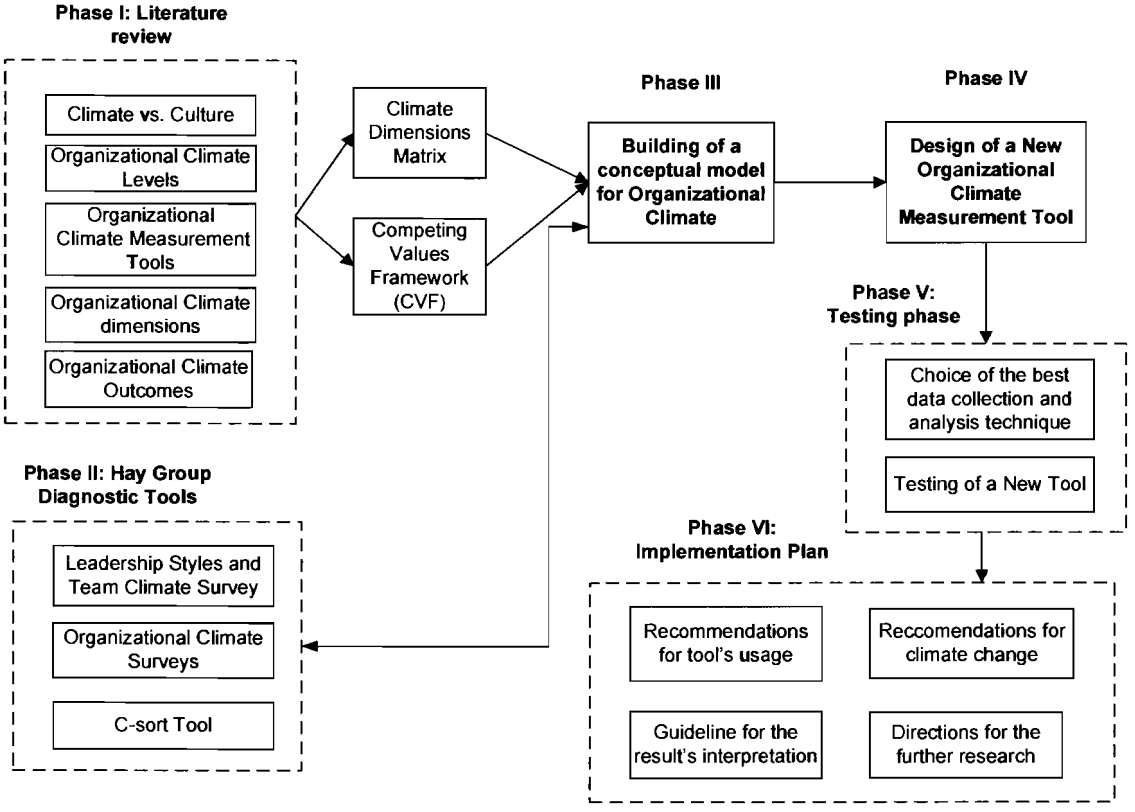
(Source: http://www.m1creativity.com/map2003/innovat/climate.htm)

Based on the Figure 1.1. one can see that organizational climate plays an important role for the effective work and performance of organization as a whole. This study will investigate the character of this influence and the most efficient way of measuring the climate construct.

1.2. Structure of the study

The structure of the whole study is reflected in the diagram presented in the Figure 1.2.

Figure 1.2. Structure of the Study



The whole study can be divided in separate phases. Phase I is aimed to conduct a profound literature research, analyzing and underpinning the latest academic research and achievements in the area of the organizational climate and culture measurement and assessment. The structure of the literature study comprises the comparison of the terms of organizational culture and climate and revealing their similarities and differences in terms of definitions, measurement approaches and implications in the management field. The further parts of the literature study concentrate primarily on the organizational climate construct, identifying three levels of analysis: individual, team and organizational. The most frequently used and validated measurement tools of the organizational climate construct are analyzed and shortly presented in the literature study. Furthermore, a summary of the organizational climate dimensions is made and a number of different dimensions on each of the measurement levels are presented in the Climate Dimensions Matrix. The matrix is used as the basis for the further research design. Finally, a research is conducted to reveal the main outcomes of the organizational climate influence on different aspects of the organizational effectiveness such as level of innovation, performance, job satisfaction, employee motivation etc.

One of the main outcomes of the literature review is the study about Competing Values Framework by Quinn and McGrath (1985), which included the empirical analysis of organizational effectiveness criteria, classifying all organizations into 4 quadrants, depending on

the combination of the axes: Flexibility vs. Control and Internal Focus vs. External Focus. Another outcome is the Climate Dimensions Matrix, which gives a list of climate dimensions, based on different literature sources. Each dimension is classified according to the level of analysis in which it was used in a particular literature study. Moreover, it attributes each of the chosen dimensions to a certain quadrant of the CVF presented earlier and gives an example of questions used for obtaining measures of a particular climate dimension. Thus, Climate Dimensions Matrix and CVF study are two important aspects derived from the literature study and used as the basis for the further design phases III and IV.

Phase II is aimed to make a revision of the already existing diagnostic and measurement tools of the Hay Group. Tools such as Leadership Styles and Team Climate Survey, Organizational Climate Survey and C-Sort survey were reviewed. The purpose is to identify the main constraints and requirements from the side of the Hay Group for the design process of the new diagnostic tool of the organizational climate.

Phase III is aimed to build a new conceptual model of organizational climate. It will be based on the outcomes of the Climate Dimensions Matrix and the study about Competing Values Framework as the main requirements and constraints from the literature. Furthermore, the results of the Hay Group diagnostic tools revision are used as the main requirements and constraints from Hay Group.

After building the conceptual model for organizational climate in step III the actual design of the new organizational climate measurement tool will be elaborated in phase IV. The choice for the number of the „core" and „elective" dimensions depending on the type of the CVF quadrant will be explained providing a detailed description of the development steps of the tool.

Phase V deals with the preparation and execution of the testing and validation of the newly developed tool. The choice of argumentation for the most appropriate data collection and analysis technique will be presented in this part of the thesis.

Finally, phase VI will finish up with the presentation of the design interventions and implementation plan of the developed organizational climate measurement tool. It will indicate the directions for the future interventions which could be undertaken in each of the quadrants and organizational climate dimensions. Furthermore, the study's limitations and directions for future research will be given in this phase. The study will also provide practical recommendations for the diagnostic tool's usage and general conclusions for the whole master thesis graduation project.

Chapter 2: Description of organization

2.1. Introduction

The research project was conducted at Hay Group Netherlands, which is a part of Hay Group International. In this chapter the description of both organizations will be given. Further on, mission, vision and strategy of Hay Group Netherlands and a short description of their main products and service will be presented.

2.2. Hay Group

Hay Group is an international organization with offices in 88 offices in 47 countries of the world with about 3000 employees working there. The headquarters of Hay Group is located in Philadelphia, USA. Hay Group was founded in 1943 by Edward N. Hay. He developed a new methodology for objective evaluation of any function within an organization. Later on, Hay Group developed a wide network of customers all over the world and became an expert in the Human Resource Management market, while using this methodology for providing consulting services to a wide range of companies and organizations. The main mission of Hay Group is to help organizations by turning their strategies into reality. It is also the guideline on which all Hay Group employees base their activities. In the course of years its activities were expanded from reward analysis and job evaluation to analysis and assessment of more global relations between employees, organization and organizational mission, vision and strategy.

Hay Group is one of the few consultancy companies that specialize on the whole area of HR and is seen as one of the leaders in this field, providing consulting services in the issues of HR, management and organizational performance.

2.3. Hay Group Netherlands

The Dutch office of Hay Group exists since 1973 and is located in Zeist. Its official name is Hay Group Netherlands. Hay Group belongs to the top-20 consultancy companies of the Netherlands. Hay Group has the vision that organizational climate plays one of the most important roles as the determinant of the organizational performance and welfare.

However, the general mission that "Hay Group helps organizations by turning their strategies into reality" still remains an important guideline in its activities; Hay Group sees the improvement of the organizational climate in the Netherlands as an important element of its main mission statement. Thus, the chosen strategy for this purpose as the way to improve organizational performance concerns changes in the organizational climate within the whole organization.

2.4. Services and products of Hay Group Netherlands

Hay Group has adjusted the general service package of the global Hay Group according to the local circumstances and specific requirements of the Dutch companies. Thus, the main products of Hay Group Netherlands include providing of such services as job evaluation tools, design of reward systems, performance management, talent development and organizational change. The general mission "to help organizations by turning their strategies into reality" and improvement of the organizational climate in the Netherlands still remain to be the main priorities in this case.

Hay Group provides two kinds of services:

⇒ Service: services with a high rate of customization
⇒ Delivery: services with a high rate of standardization.

Hay Group supports organizations in transforming an organizational strategy into concrete results and contributes for finding the solutions for the questions in the following areas:

⇒ Leadership;
⇒ Culture, norms and values;
⇒ Work processes and -systems;
⇒ Management processes and -systems;
⇒ Organizational, team and functional design;
⇒ Individual and team competences;
⇒ Design of reward systems.

Hay Group always strives to provide high-level consultancy services based and anchored on the latest notions of academic research in this field. The main approach used for the work with clients consists of several consecutive steps. First, a detailed interview with the company is conducted where the main expectations and task definition for the further consultancy support is established. Further on, by means of applying various diagnostic tools and separate interviews with managers from different organizational levels a scan of the organizational performance and status quo is being made. It allows to determine the most suitable kind of intervention for the further change and improvement of the current situation within the organization.

2.5. Organizational chart and personnel

Hay Group strives to provide the best consulting services in the above mentioned areas. That is why it constantly develops and improves its services and products. In order to be able to organize its work in the best way, it divided the organization in certain Business Units, according to the kind of tasks and responsibilities. Their graphical representation and the full organizational chart of the Hay Group's structure can be found in Appendix 1.

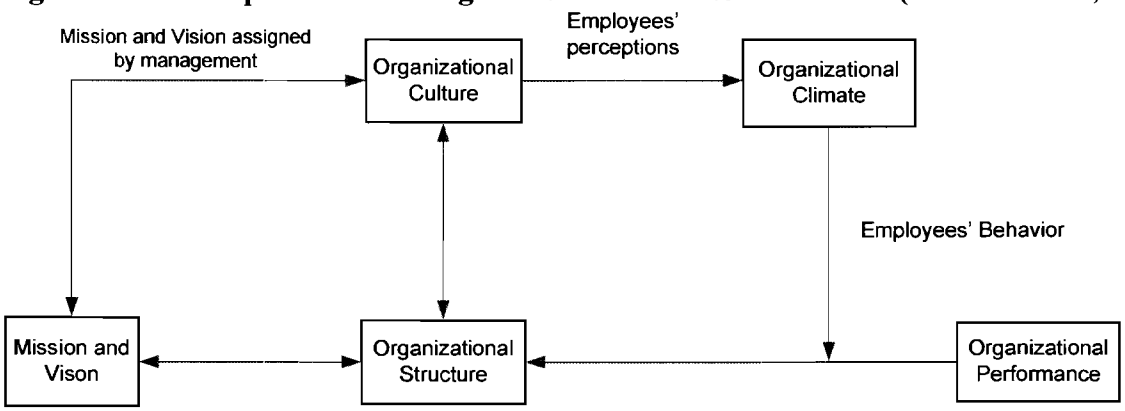
Chapter 3: Theoretical Background

Before staring to build the conceptual model for the organizational climate assessment instrument, academic literature was screened reflecting the main latest notions and research directions in the realm of organizational climate and culture. A brief overview of the literature study (Dvortsov, 2008) is presented in this chapter.

First, organizational climate and organizational culture were compared in terms of their definitions, background and measurement focus. Their comparison resulted into the conclusion that culture and climate are basically two different perspectives on organizational environments, which have generated various distinct methods, theories, and epistemologies (Denison, 1996). Climate refers to a *situation* and it links to thoughts, feelings, and behaviors of organizational members. Thus, it is temporal, subjective, and often subject to direct manipulations by people with power and influence. Culture, in contrast, refers to an *evolved context* within which a situation may be embedded. Thus, it is rooted in history, collective held, and sufficiently complex to resist many attempts to direct manipulation.

Further on, examples of the conceptual models from the current literature show interdependences between both of the constructs of organizational climate and culture. One of such interdependencies was presented in the master thesis of Dekkers (2006) which was developed based on Robbins (2003) and adjusted according to the differences between organizational culture and climate.

Figure 3.1. Conceptual model: Organizational Climate vs. Culture (after Robbins, 2003)



Based on Figure 3.1. Dekkers (2006) argues that organizational mission and vision are the first elements which shape and form any organization, and subsequently any changes in the organization can lead to the adjustment of its mission and vision. At the same time both organizational culture and organizational structure have a direct influence on the mission and vision, and vice versa. Thus, the mission and vision adopted by management will be transmitted to the other employees creating a certain organizational culture. Organizational climate, however, consists of the employee's perceptions of the created organizational culture. On the other hand, organizational climate influences the relationship between organizational structure and overall organizational performance through certain employees' behaviors. In its turn organizational performance has an indirect influence on the organizational mission and vision and their possible adjustment in future.

In the next step of the literature study the construct of organizational climate was described in more detail. Summarizing its definitions given by different authors such key words were

derived, as "perceptions", "attitudes" and "beliefs". The common definition was found to be "the employees' common shared perceptions about their work environment on one of the levels of a particular organization, department, work group or individual employee".

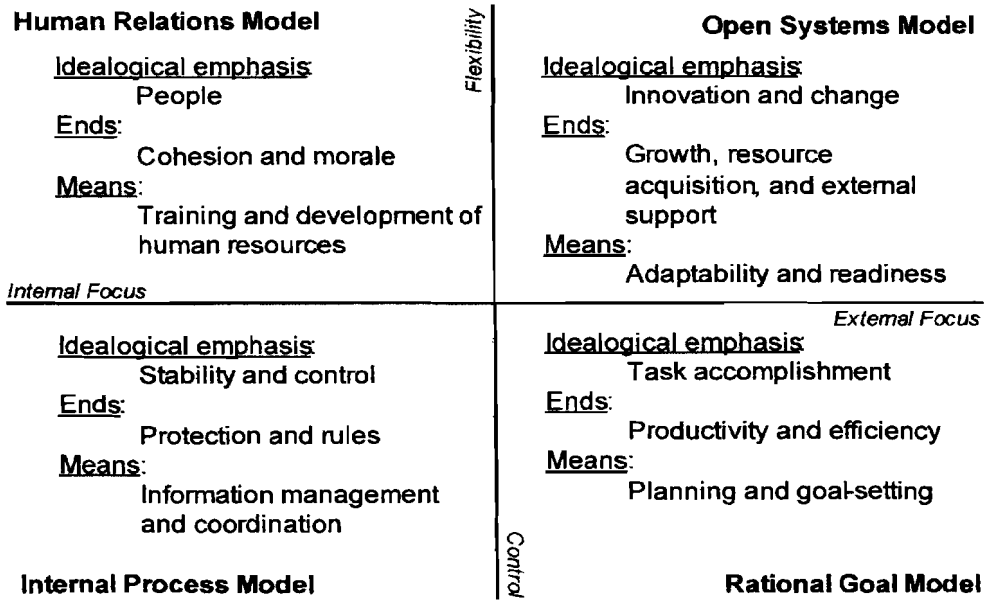
One can distinguish three different levels of analysis of climate: individual, team and organizational. A brief description of each of these levels will be given. *Individual climate,* which is also very often defined as a psychological climate (Rousseau, 1998), can be seen as the employees' unaggregated individual perceptions of their environment. Thus, psychological climate is shaped by many factors, including individual thinking styles, personality, cognitive processes, culture and social interactions.

Team climate, which is also called as *an aggregate climate,* is individual perceptions averaged at some formal hierarchical level: work group, department or division (Rousseau, 1998). The main assumption in this case is that certain organizational groups or units have a climate, which is based on the shared meaning and values of this particular group.

Organizational climate. According to Rousseau (1998) it can be defined as individual perceptions of organizational practices and characteristics that meet statistical criteria for aggregation to that level. According to Patterson (2005), organizational climate is primarily understood as an intervening variable between the context of an organization and the behavior of its members, attempting to understand how employees experience their organizations

After defining three climate levels of analysis, organizational climate level will be described in more detail. A study conducted by Quinn & McGrath (1985) resulted in construction of the Competing Values Framework (CVF). It includes empirical analysis of organizational effectiveness criteria. Their study stated that differences among many effectiveness criteria in the literature can be better understood when they are organized along two axes (see Figure 3.2.).

Figure 3.2. Competing Values Framework (CVF), after Quinn & McGrath (1985)



One axis reflects the organizational focus: whether an organization focuses its attention inward, toward its internal dynamics (person-oriented focus), or outward, towards its external

environment (organization-oriented focus). Another axis reflects the structure, namely preferences in organizational structuring lie more in flexibility or in control. Patterson et al (2005) argues that these opposite values underlie organizational climate for innovation.

The CVF's four quadrants describe different valued outcomes and define effective organizational performance and means through which they are likely to be obtained. Each quadrant represents a set of valued outcomes and coherent managerial ideology about how to attain them. Taken together, the quadrants map out the major shifts that have occurred in both managerial ideologies and organizational theorizing over time. The model does not propose that organizations can be located predominantly in one of the four quadrants, but because every organization is a complex structure it will be active and will have its influence with different strengths in each of these domains (Quinn & McGrath, 1985). A balance of competing organizational values is required for an organizational growth and development.

Considering the Competing Values Framework, one can say that relative balance of the four organizational ideologies should be in balance with the organizational structure. Therefore, there is no best organizational climate, since every organization is a unique entity in terms of its structure, technologies it uses, its external environment etc.

Another measurement instrument at the organizational level was developed by Patterson et al (2005). It is a multidimensional measurement instrument of organizational climate, Organizational Climate Measure (OCM), based on the Competing Values Framework (CVF) model (Quinn & McGrath, 1985). In order to come up with an effective and validated instrument it is important to be able to identify the underlying climate dimensions. The chosen dimensions were derived by the authors from the most frequently used research studies and were classified according to four quadrants presented in the CVF. The dimensions selection process resulted into 17 dimensions, divided into four quadrants: human relations, internal process, open systems and rational goal (see Figure 3.22). The following instrument can be seen as one of the good examples the organizational climate measurement tools. It assists in establishing further connection between organizational climate and other performance outcomes.

In the next part of the literature review the Climate Dimensions Matrix was presented. It was found to be difficult to find any direct antecedents of organizational climate. However, based on the scientific literature in this field one could clearly distinguish a number of various dimensions which have a certain influence on the construct of organizational climate. In the Climate Dimensions Matrix (see Appendix 7) a list of climate dimensions, based on different literature sources is given. Each of those dimensions can be found on one or several measurement levels: individual, team or organizational. This list gives a general overview of the existing factors which play a role and have a certain impact on the organizational climate construct. Moreover, it attributes each of the chosen dimensions to a certain quadrant of the CVF presented earlier and gives an example of questions used for obtaining measures of a particular climate dimension. Thus, the Climate Dimensions Matrix (see Appendix 7) can be seen as the main output of the literature study for the further design process of the conceptual model and measurement instrument of the organizational climate which is developed during the master thesis project.

To conclude, organizational climate is an important construct in the field of management science in general and in operations management and logistics realm in particular. It has a key role in implementation and maintenance of effective functioning of any new processes and procedures within a company. Thus, its investigation and taking advantage of its influence on the organization and certain performance outcomes will be of a great importance for the further successful organizational development and growth.

Chapter 4: Research Design Approach

In the first part of the master thesis graduation project a literature review of the latest academic notions about the construct of organizational climate was performed. Moreover, a number of currently used diagnostic tools within the Hay Group were analyzed. These steps resulted in a set of requirements and constraints, which were used as the main guideline for the further design of the organizational climate measurement tool.

4.1. Design Preparation

4.1.1. Requirements and Constraints

The literature study delivered a number of constraints for the future measurement tool, which concerned such points as the tool's concise structure, easiness in its understanding and usage by the consultants and respondents. The developed organizational climate measurement tool should also include the most important dimensions of the organizational climate, representing reliable scales based on different literature sources. Each dimension is measured by a number of questions. Therefore, such characteristics as content validity, reliability and model fit should be applicable to each of the dimensions. Content validity refers to whether the questions include and represent all of the content of a particular construct. Reliability is understood as the extent to which the measurement of a test remains consistent over repeated tests of the same subjects under identical conditions (De Vocht, 2000). Finally, one can conclude about a good model fit if the relationship between an item and a specific dimension of organizational climate is strong and the other relations are weak (Hair et al, 2006).

Diagnostic tools and instruments that were already used by Hay Group have also contributed to the number of requirements and constraints for the designing of the new organizational climate measurement tool. One of the company's requirements concerned the tool's consistency with the latest findings in the academic literature in the field of organizational climate, its dimensions and performance outcomes. The new tool should also be linked to already existing diagnostic tools of Hay Group such as Management Style Inventory-2007 and Quick Scan that reflect their main methodological structure and approach. Finally, it should be in line with the products and services provided by Hay Group.

A short summary of the main requirements and constraints for the new organizational climate diagnostic tool can be found in Table 4.1.

Table 4.1. Requirements and Constraints for the Organizational Climate Measurement Tool

Literature	Hay Group
Concise structure	Consistency with already existing diagnostic tools of Hay Group
Easiness in understanding and usage	Easiness in usage
Reliability of climate scales	Clear structure and availability of technical manual for new users
Content validity and model fit of each of the questions	Correspondence with products and services provided by Hay Group
Consistency with latest academic findings	

4.1.2. Purpose of the tool

The main purpose of the new organizational climate measurement tool is to ensure a quick scan of the organizational climate situation in a certain company. It will assist in presenting the state of affairs about the organizational climate in the organization, indicating climate dimensions how they are perceived by the employees. Furthermore, the aim of the tool's usage is to provide a company with a number of practical recommendations and interventions about further ways of changing the particular climate dimension in the desired direction.

4.1.3. Data collection method

A questionnaire was considered to be the best quantitative data collection method in the focus of the following research problem. A questionnaire is defined as a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Bryman et al, 2003). The reason for this choice in comparison with a structured interview, as an alternative data collection technique, lies in the number of advantages which it offers to the researcher.

A first advantage of the questionnaire concerns the administration costs and the time aspects. One often needs to gather data from a geographically widely dispersed sample or from people who due to their profession are often unavailable or have insufficient time for a special meeting with an interviewer. In this case a self-completion questionnaire is the best and the most cost-effective solution. It allows a researcher to reach a big number of people in a short time. Furthermore, it is also much quicker to administer, since it can be sent by post or e-mail to its respondents at the same time and it does not need a special time slot for every single interview. However, one needs to bear in mind the necessity to send a regular reminder for the questionnaire recipients with the request for it to be filled in time. Respondents can choose by themselves the time and the place for filling out the questionnaire. Finally, the usage of questionnaire gives the possibility to eliminate a bias in interview effects and interviewer variability. In another words due to characteristics of interviewer such as ethnicity, gender, social background or the fact that interviewers may ask questions in a different order or in different ways may bias the answers the respondents provide.

The main advantages and disadvantages of questionnaire as the possible data collection method are presented in Table 4.2.

Table 4.2. Advantages and Disadvantages of Questionnaire as the Data Collection Method

Advantages	Disadvantages
Possibility to reach big sample size in a short time	Necessity of the reminder for the respondents
Low administrative costs	Absence of the personal contact with the respondents
Flexibility in defining the time and place of the questionnaire's filling	Respondents often tend to avoid giving honest answers
Absence of interviewers bias on the respondent's answers	

4.1.4. Type of measurement tool

Another design choice concerned the form of the climate measurement tool. It was decided to choose a multidimensional measure of organizational climate rather than concentrating on one particular climate dimension or facet-specific climate such as climate for innovation or safety climate. A multidimensional measure was considered to be more appropriate to be used for the quick scan purpose within the organization than facet-specific climate measurement instruments.

4.2. Development of the conceptual model of organizational climate

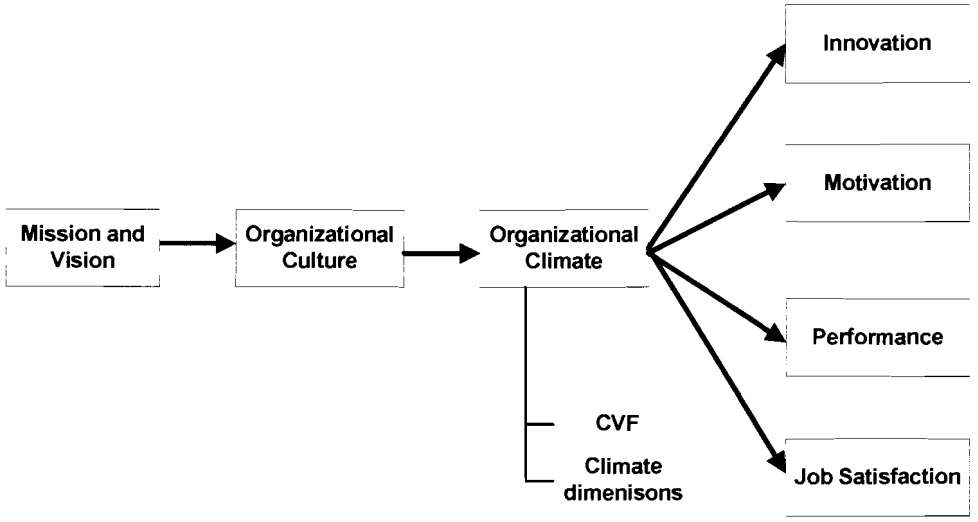
The development of the conceptual model for organization climate construct was conducted before starting the design process of the actual measurement tool. The purpose of such a model is to reflect the position of organizational climate among other constructs and its influence on some particular performance outcomes. In this development phase a large number of scientific articles in this field were reviewed where authors provided a presentation and description of various conceptual models that included an organizational climate construct.

The main criteria for selection of a particular conceptual model were:

- Quality of the academic publication or academic journal: its ranking according to Science Citation Index (http://scientific.thomsonreuters.com/products/sci);
- Level of analysis of the climate construct (individual, team or organizational);
- Verifiable reliability and validity of the constructs within the model.

Based on these criteria and reviewed scientific literature the following conceptual model was constructed (see Figure 4.1.).

Figure 4.1. Conceptual Model of Organizational Construct



The model as such does not represent any conceptual model found in a specific scientific study. It was constructed more as a combination of various approaches and views on the organizational climate construct derived from various sources.

From the figure one can see that organizational mission and vision are the first elements which shape and form any organization, and subsequently any changes in the organization can lead to the adjustment of its mission and vision. At the same time organizational culture has a direct influence on its mission and visions and vice versa. Organizational culture in this case represents more solid construct shaped by the common vision and mission of the particular organization that cannot be quickly adjusted and changed over time. Thus, mission and vision adopted by the management will be transmitted to the other employees creating a certain organizational culture. Organizational climate, in its turn, represents the employees' perceptions of the created organizational culture, reflecting the effect of the organizational culture on their perception of the particular organization.

The construct of organizational climate is characterized by a number of measurable dimensions. Each climate dimension is presented in detail in the Climate Dimensions Matrix (see Appendix 7). The Matrix also indicates the dimension's attribution to a particular quadrant of the Competing Values Framework (CVF) of Quinn and McGrath (1985). A detailed description of the CVF concept and its implications for the organizational performance is presented in Chapter 3.

The right part of this conceptual model also shows the influence of organizational climate on various organizational performance outcomes, such as innovation, motivation, job satisfaction and performance. The connection between organizational climate and certain performance outcomes is derived from various scientific studies found during the literature study and underlines the importance of developing a good reliable measure for organizational climate construct.

Thus, Parker et al (2003) argue that organizational climate perceptions can be viewed as a mediating link between organizational characteristics and individual outcomes such as employee attitudes, motivation and performance. This study can be seen as an example of the scientific studies that aimed to investigate the link between organizational climate and performance. Litwin (1968) investigated relationships and the significance of correlations between organizational climate construct and other related constructs, including motivation and job satisfaction. Finally, the study of Saleh &Wang (1993) examined the role and influence of organizational climate on the level of innovation within organization and the strength of this relationship. Interrelationships between organizational climate and its outcomes are discussed in detail by Dvortsov (2008). This study, however, will concentrate on the development of the effective validated measure for organizational climate and will not further on investigate the relationships between organizational climate and its outcomes.

4.3.Development of the organizational climate measurement tool

The design process of the organizational climate diagnostic tool is an incremental process which included a number of steps. In each of the steps some particular choices and design decisions were taken. The general overview of all design steps with decisions and choices made during the development of the organizational climate management tool can be seen in the Table 4.3.

Table 4.3. Design Choices

	Design Step	Purpose	Short description
1	CVF definition	Intake of the project.	**Quantitative:** OCAI instrument in the form of the questionnaire **Qualitative:** interview with the manager of the company
2	Usage of OCM (Patterson et al, 2006).	Combination of CVF theory with detailed information about climate dimensions.	Questionnaire with 17 climate dimensions and their distribution thematically among CVF quadrants
3	Set-up of Climate Dimensions Matrix	Provide good overview of each climate dimension and available measures.	The Climate Dimensions Matrix is a list of climate dimensions from different academic studies. It contains a short description of the particular climate dimension, indication of its resemblance with existing dimensions from organizational climate diagnostic tool of Hay Group, questions for measuring the climate dimension and the literature source from which the study about a particular dimension was derived.
4	Reduction of number of dimensions.	Reducing the length of the organizational climate questionnaire and making it more accessible for the respondents.	Choice of the appropriate organization climate dimension according to the specific criteria: • Number of academic studies in which a particular dimension was used; • Quality of academic journal in which the study with a climate dimension was published; • Similarity in the dimension' meaning (whether several dimensions measure the same thing, but are rather described in a different way); • Dimension's consistency with the items found from existing organizational climate diagnostic tools of Hay Group.
5	Structural adjustments of the organizational climate measurement tool.	Adapting the instrument to specific characteristics and needs of the organization.	The dimensions of the organizational climate measurement tool were divided into "core" and "electives". Such division takes into account basic characteristics of each of the CVF quadrants in every organization by always using the same "core" dimensions in the organizational climate questionnaire. However, depending on the CVF quadrant in which the organization is located and/or wants to be one can add a number of the elective dimensions to be measured at the specific organization.

Further on I will elaborate on the design steps which are listed in the Table 4.3. giving more detailed description of the made choices and decisions in each of the steps.

Step 1: CVF description

In this step the theory about CVF was applied. Before using an organizational climate instrument by the consultants in a particular company, one has to determine the CVF quadrant where the organization is located. It will help to meet the demands of the particular company, performing the intake phase of the organizational needs and to implement organizational climate instrument more efficiently. There are two alternatives for determining the quadrant to which a particular organization belongs.

The first alternative is a ***quantitative approach*** suggested by Cameron and Quinn (1999), which involves Organizational Climate Assessment Instrument (OCAI). This instrument is designed in the form of a questionnaire that requires individuals to respond to six items, assessing in that way six dimensions of organizational culture and placing a particular organization in a certain CVF quadrant. In another words, OCAI helps to determine the quadrant where the organization operates at this moment, characterizing its current organizational culture. It will also give an indication of the preferred culture showing the quadrant to which the organization wants to belong in future. However, it might also happen that desired and preferred situations coincide within one CVF quadrant for an organization. Thus, the OCAI tool provides a picture of how an organization operates and the values which characterize it. A summary of the OCAI instrument with the scales and instructions for its scoring can be found in Appendix 3.

Another way to define the current and desired quadrant in which a particular organization belongs is ***a qualitative approach***. It can be performed by means of an interview with representatives of the company's management team. During such an interview the management team will be offered a short description of each of the CVF quadrants with a precise indication of the key characteristics of a typical organization belonging to each of the CVF quadrants and successful examples of such organizations from the Dutch and international markets. The template of such a description can be found in Appendix 4. Such an interview session will result in defining the current quadrant where the particular organization is located and the preferred quadrant.

Thus, in both of the approaches the company's management will have to identify (1) the *current situation*, i. e., the quadrant in which the company is located now and (2) the *desired situation,* i. e. the quadrant the company would like to be in. These two states might also coincide in one quadrant of the Competing Values Framework. It is important that managers provide honest and realistic answers to the questions about the current and the desired quadrant in order to ensure the effective usage and implementation of the organizational climate measurement tool in the future.

To conclude, the first phase will enable consultants to get the view of the company's management about the current and desired organizational culture in a certain quadrant. In this master thesis for the purposes of validation of the organizational climate diagnostic tool the preference is given to the qualitative approach. The reason for choosing this approach lies in the type of the company where the new organizational climate measurement tool was validated. Hay Group Netherlands is a relatively small consultancy company with 180 employees in total. It has a flat hierarchy structure that allows to reach the company's management quite easily for a personal interview. In that sense, using the qualitative approach with the management team of Hay Group made it possible to obtain the outcomes of the management view on the current and desired climate situation within the company in a very short time.

Step 2: Usage of OCM

In the second phase the output of the first intake meeting with an organization will be used for the further implementation of the organizational climate measurement tool.

The Organizational Climate Measure (OCM) developed by Patterson et al (2005) was used as the starting point for the further design process. OCM is a multidimensional climate measure that consists of 17 climate dimensions or scales that represent different aspects of the organizational climate construct. The dimensions hold four, five or six items that need to be scored on agreement based on Likert scales. The main reason for choosing OCM as the starting point is the connection it makes between organizational climate dimensions and particular quadrants of the Competing Values Framework. An overview of the Patterson's OCM dimensions' mapping on the CVF quadrants is presented in Figure 4.2.

Figure 4.2.
Organizational Climate Dimensions within CVF Quadrants (after Patterson et al, 2006)

Human Relations Quadrant	**Open System Quadrant**
Autonomy Integration/Information sharing Involvement/Participation Training/Self-Expression Management Support Welfare	Flexibility Outward Focus Reflexivity Job Challenge
Internal Process Quadrant	**Rational Goal Quadrant**
Formalization/Rules orientation Tradition	Organizational clarity Efficiency Effort Pressure to Produce Quality Performance feedback

Step 3: Set-up of Climate Dimensions Matrix

The main outcome of the literature review of organizational climate was the **Climate Dimensions Matrix** (see Appendix 7). An example of its final version on two particular dimensions of the Operational Excellence quadrant can be seen in the Table 4.4. It reflects a number of dimensions of the climate construct taken from various academic studies and shows their connection with a certain CVF quadrant. For each dimension a short description and its classification in terms of a "core" or an "elective" group is given. Furthermore, the CVF quadrant to which the dimension belongs is specified. One can also see whether a particular dimension has any resemblance with the dimensions from the organizational climate diagnostic tool on team level which is currently used by Hay Group. For each dimension a sample of questions is listed which could be included in the future organizational climate diagnostic tool. Each of the questions was derived from a relevant scientific study, the reference for which can also be seen in the Climate Dimensions Matrix. Furthermore, for the consistency with the currently used diagnostic tools within Hay Group a column ***"Hay used Dimensions"*** is added. It indicated the relation of the climate dimensions in the new Matrix with already used by Hay Group climate dimensions on team level.

N	Climate Dimension	CVF	Description	Type of Dimensions	Hay used Dimensions	Questions	Literature Source
1	Formalization/ Rules Orientation	Internal Process	Perception of organizational concern with formal rules and procedures	Operational Excellence	Flexibility (Reversed)	It is considered very important here to follow the rules	Patterson et al (2005)
						People can ignore here formal procedures and rules if it helps to get the job done	Payne et al (1971)
						Everything has to be done by the book	Patterson et al (2005)
						It's not necessary to follow procedures to the letter around here	Payne et al (1971)
						Nobody gets too upset if people - break the rules around here	Patterson et al (2005)
2	Tradition	Internal Process	Perception of a big value of the traditional way to deal with the things and organizational procedures	Operational Excellence	Flexibility (Reversed)	Changes in the way things are done here happen very slowly	Patterson et al (2005)
						Mangers like to stick to established traditional ways of doing things here	Patterson et al (2005)
						The way this organization does the things has never changed so much	Patterson et al (2005)
						Traditional and established way of doing things is considered to be the most effective and reliable working policy in this organization	Patterson et al (2005)

Table 4.4. Example of the Final Climate Dimensions Matrix for Operational Excellence Quadrant

The main criteria for the questions' construction and choice were:

1. The degree to which the questions asked refer to the dimension and reflect its main characteristics.
2. There should be always one issue or topic that is asked by the question.
3. Presence of reversed items in the questions of the survey. These items are aimed to stimulate the respondent attentively to read the questions before answering them and to avoid the bias of giving the same answer to a sequence of questions all the time.
4. Keeping the questions in the impersonal form, such as: "Managers in this organization..." or "It is highly valued here that...". It will ensure the climate measurement tool to remain on the organizational level and not to switch to the team or personal level of analysis.

Step 4: Reduction of number of dimensions

Originally there were 32 climate dimensions presented in the Climate Dimensions Matrix after conducting the literature review. For the design purposes in order to be able to comply with the main constraints defined for the organizational climate instrument, it was decided to decrease the number of organizational dimensions from 32 to 25 dimensions.

The main criteria for the choice of dimensions were:

1. Number of academic studies in which a particular dimension was used;
2. Quality of academic journal where the study with a particular climate dimension was performed;
3. Similarity in the dimension' meaning: whether several dimensions intend to measure the same thing, but are rather described in a different way. For example, instead of splitting the Formalization and Rules Orientation (see Table 4.4.) into two different dimensions it was decided to keep them under one common label because of the similarity in the dimensions' meanings.

It was decided to keep all of the 17 climate dimensions from the OCM study of Patterson et al (2005) to ensure the tool's consistency. Moreover, the following eleven climate dimensions:

- Intimacy,
- Esprit,
- Aloofness,
- Trust,
- Egalitarism,
- Open-Mindedness,
- Emotional Control,
- Physical Caution,
- Sociability,
- Homogeneity,
- Conventionality

were removed from the original Climate Dimensions Matrix which resulted from organizational climate literature review. The dimensions of Sociability, Open-Mindedness and Trust were united under one label *Cohesion.*

For the purpose of representing equal impact and importance of every quadrant for organizational effectiveness it was decided to deviate from the original description of the CVF model and to rename Internal Process Quadrant as Operational Excellence Quadrant. This label will provide a more positive view about the quadrants characteristics, indicating effectiveness

criteria of the organizations that operate in this quadrant. Also, three new climate dimensions: Routinization, Job Security and Stability were added to the Operational Excellence Quadrant of the Climate Dimensions Matrix. Thus, the renewed Climate Dimensions Matrix was reduced and adjusted from 32 to 25 dimensions (see Table 4.5).

Table 4.5. Refined Climate Dimensions Matrix

N	Climate Dimension	CVF Quadrant	Type of dimension	Description
1	Autonomy	Human Relations	Core	Perception of freedom in decision making in terms of the executed job.
2	Integration/ Information sharing	Human Relations	Elective	Perception of interdepartmental trust and cooperation
3	Involvement/ Participation	Human Relations	Core	Perception of being involved in the decisions made by the managers and being able to contribute to the decision making process
4	Training/ Self-expression	Human Relations	Elective	Perception of organizational concern for the development of employees' professional skills
5	Welfare	Human Relations	Elective	The extent to which the organization values and cares for its employees
6	Management Support	Human Relations	Core	Perception of tolerance, support and freedom to develop open communication between organization's members and their superiors.
7	Formalization and Rules Orientation	Operational Excellence	Core	Perception of organizational concern with rules and formal procedures
8	Tradition	Operational Excellence	Core	Perception of a big value of the traditional way to deal with the things and organizational procedures
9	Routinization	Operational Excellence	Elective	Perception of the necessity to perform a big amount of routine and monotonous tasks
10	Stability	Operational Excellence	Elective	Perception of a big emphasize on stability in work
11	Job security	Operational Excellence	Elective	Perception of company's concern with maintenance of a high level of job security
12	Innovation & Flexibility	Open Systems	Core	Perception of the organizational orientation towards innovation and

				change
13	Outward focus	Open Systems	Core	Perception of the organization being highly responsive to the needs of the customers and the market place in general
14	Reflexivity	Open Systems	Core	Perception of company's concern with reviewing and reflecting upon objectives, strategies and work processes in order to adapt to the wider environment
15	Organizational Clarity	Rational Goal	Core	Perception of the organizational goal always to be clearly defined
16	Efficiency	Rational Goal	Core	Perception of the company's concern about the employees' high level of efficiency and productivity
17	Effort/Contribution	Rational Goal	Elective	Perception of the necessity to work hard for achieving goals in this organization
18	Performance Feedback	Rational Goal	Core	Perception that the employees' performance is being measured in this organization, and people get enough feedback about how good they perform
19	Pressure to produce/ Work intensity	Rational Goal	Elective	Perception of pressure for employees to meet targets and comply with performance standards
20	Quality	Rational Goal	Elective	Perception that the company is highly quality oriented
21	Rewards/Recognition	Rational Goal	Elective	Perception that employees receive a fair amount of rewards and recognition for their work and performance
23	Job Challenge	Open Systems	Elective	The degree to which the jobs designed by the organization have variety and challenge for an employee
24	Future orientation	Open Systems	Elective	Perception of strategically planning and ability to recognize and grasp new notions and future initiatives in this organization
25	Cohesion (Warmth and support)	Human Relations	Elective	Perception of team spirit within organization's environment, including member's willingness to provide material help

Step 5: Structural adjustments of the Organizational Climate Diagnostic Tool

Another design choice during the tool's development process concerned the its structure. In order to be able to address the needs of the specific company in a better and more efficient way it was decided to divide all climate dimensions in a new Climate Dimensions Matrix into two groups: the "core" and the "elective".

The "core" dimensions will be permanently incorporated and always addressed in the tool. The purpose for this choice is the fact that organization includes the elements from every quadrant, even though it may primarily focus on one of the four CVF quadrants.

Furthermore, it is important to mention that all of the "core" dimensions are taken from the Patterson's et al (2005) OCM measure. This choice will ensure the tool's consistency and the reliability of its results. Each of the dimensions is attributed to a specific CVF quadrant which means that all aspects of organizational effectiveness from the CVF study of Quinn and McGrath (1985) will taken into consideration in the new designed tool.

The remaining dimensions from the new Climate Dimensions Matrix, which are called ***the "elective" dimensions,*** were also distributed according to their affiliation with the characteristics of a particular CVF quadrant. They can be added by the consultant to the tool depending on the quadrant in which the organization is located. If after the results of the first CVF diagnostics conducted in the phase I it turns out that the organization is now currently located in one CVF quadrant but in future it aspires to move and be primarily active in another quadrant, and then the "elective" dimensions from both these quadrants will be added to the organizational climate measurement tool. The main reason for making these dimensions so-called "elective" part of the composed measurement tool is the possibility to be more flexible and address directly the individual needs of a particular organization depending on its effectiveness criteria, reflected in the type of the CVF quadrant it currently operates or is aspiring to be. Such a structure will also help to avoid that all 25 dimensions with more than 100 questions would always be addressed in every organization without consideration of the type of the CVF quadrant and the organization's effectiveness criteria.

The decision which particular dimension will be assigned to the group of the "core" dimensions and which one to the group of the "elective" ones was an iterative process which consisted of three steps. In these steps three different scenarios were presented with various possibilities to distribute 25 dimensions from the Climate Dimensions Matrix into the "core" and "elective" ones. These scenarios and their detailed description can be found in Appendix 2.

Main criteria for the choice of the preferred scenario:

1. "Core" dimensions, which will be always asked in the tool, have to be taken completely from the OCM instrument of Patterson et al (2005), so that the consistency of the tool can be ensured;
2. The maximum number of the core dimensions per quadrant was three, in order to avoid the tool being too long and complicated for the recipient to complete.
3. Resemblance of the "core" dimensions with the qualitative key characteristics of each CVF quadrant. Thus, the chosen "core" dimensions are considered to be the most representative for the key characteristics of each of the CVF quadrants presented in the Appendix 2.

Based on these criteria, the third scenario was considered to be the most optimal one. It included the following set of ***"core"*** climate dimensions:

- *Human Relations Quadrant:* Management Support, Autonomy, Involvement
- *Operational Excellence Quadrant:* Formalization, Tradition
- *Open Systems Quadrant:* Innovation, Outward Focus, Reflexivity
- *Rational Goal Quadrant:* Organizational Clarity, Performance Feedback, Efficiency.

The ***"elective"*** climate dimensions per CVF quadrant were:

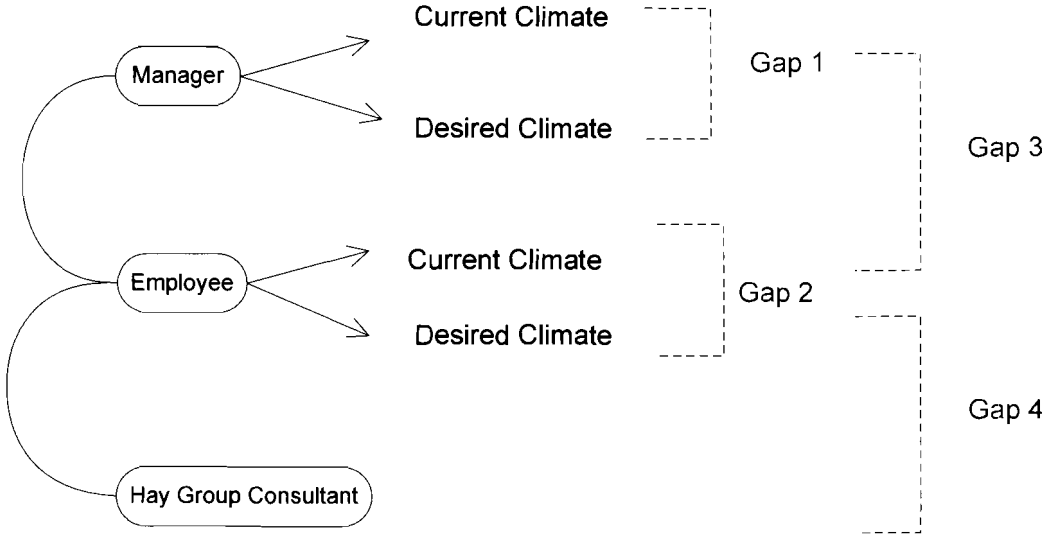
- *Human Relations Quadrant:* Information Sharing/Integration, Training, Commitment, Welfare;
- *Operational Excellence Quadrant:* Routinization, Stability, Job Security;
- *Open Systems Quadrant:* Innovation, Future Orientation, Job Challenge
- *Rational Goal Quadrant* Quality, Rewards/recognition, Pressure to Produce, Effort/ Contribution

The detailed description of each of the climate dimensions can be found in the Climate Dimensions Matrix presented in the Table 4.5.

4.4. Description of the possible Gap Analyses

After the usage of the organizational climate measurement tool within a particular organization several gap analyses for organizational climate and its dimensions can be performed. The summary of the possible gap analyses can be found in Figure 4.3.

Figure 4.3. Possible Gap Analyses



From the Figure 4.3. we can see that, in the ***first gap analysis***, the vision of the managers of the organization in terms of the current and desired CVF quadrant where the organization is located can be compared. The CVF determination by the managers takes place in the first phase of organizational climate measurement tool's usage. The ***second gap analysis*** concerns the

difference of the current and desired situations in employees' perspective of the perceived work environment within the organization, based on the number of "core" and "elective" climate dimensions previously discussed in this chapter. This gap analysis was one of the main issues for the design of organizational climate measurement tool. The ***third gap analysis*** can be performed from the difference in the vision between the managers and the employees on the current and desired situation with organizational climate. Finally, one can consider the gaps between the view of the Hay Group's consultant and both managers and employees on the organizational climate situation ***as the fourth gap analysis*** in this case.

On the particular example of Hay Group that will be discussed in Chapter 5.2. the gap between the management and employees perception of the current organizational climate will be used. However, depending on the purpose of the tool's implementation within particular organization one can consider the results from any of these various gap analyses. Thus, the outcomes of this gap analysis form the basis for the further interventions design for the organizational climate improvement within this organization and organization's movement from one CVF quadrant to another, which will be described in detail in the next section.

To conclude, the design of a new organizational climate diagnostic tool was performed by means of making a number of decisions. These were based on the requirements and constraints for the design of such measurement tool taken from the academic literature and current vision of the Hay Group. As a result, the newly developed diagnostic tool for organizational climate was obtained.

Chapter 5. Results

In this chapter the validation procedure of the organizational climate measurement tool will be described in detail. Furthermore, four detailed examples of the validation of the climate dimensions from each of the CVF quadrants will be elaborated, finishing up with general conclusions.

5.1. Data collection approach

This chapter will present the outcomes of the validation phase of the organizational climate measurement tool. In order to perform the validation of the new tool the survey with 130 questions was disseminated within Hay Group Netherlands. The original version of the survey was translated from English into Dutch. Afterwards, the Dutch version was translated into English by the other interpreter to avoid the bias in the quality of the translation. Finally, both of the English translations (the original and the obtained second one) were compared with each other and discussed with the supervisors from Hay Group. In case any big differences were found between them, the quality of the translation for this particular item was verified again. The items of the organizational climate survey were measured on the six-point scale from "strongly disagree" (1) to "strongly agree" (6). All of the employees of Hay Group Netherlands (180 in total), including consultants and support staff, received an introductory letter sent on behalf of the managing director of Hay Group Netherlands with the detailed description of the purpose of the organizational climate survey, its structure and main guidelines for its completion. The surveys could be completed online, what made the data collection process much easier. The respondents had the period of three weeks to complete the survey. During this time several presentations and open lunch meetings were conducted for the employees of the Hay Group in order to make them familiar with the purpose and the contents of the new diagnostic tool. After the introductory mail, two reminders were sent: at the end of the second week and one day before the final completion deadline to make sure that those people who did not read the information about the survey would still have the chance to complete it in time. The final number of respondents who filled in the organizational climate survey was 90 people from expected total number of 180 Hay Group's employees.

First of all, the obtained data was screened for the missing values and outliers in SPSS. In general 17 variables were indicated as those who have missing values, which is 0.01% of the total data. Mean substitution method was applied as the remedy to deal with this amount of data (Hair et al, 2006). Afterwards, the obtained data was screened for the outliers in order to assure its internal validity. Frequency analysis for each item in SPSS, was performed. From ninety cases two cases showed very low variance where most of the questions received the answers "strongly disagree" (1) or "strongly agree" (6) on the six-point scale. It was decided to delete those items reducing the sample size to 88 respondents, which will be used for the further statistical analyses.

5.2. Validation Procedure

After checking the data for outliers and missing values the process of validation and refinement of the whole structure of the organizational climate survey was performed. *Organizational climate tool's refinement* is an iterative process that consists of several steps. First, reliability analysis for each climate dimension was conducted. All climate dimensions that had Cronbach Alpha values below 0,5 were not considered for the further analysis. Secondly, correlations between the items within each climate dimension and inter correlations between the dimensions

within each of the four CVF were examined. The correlations values should be in the range of [0,3 – 0,8]. In the third step the factor structure of the items within each of the CVF quadrants was verified. In order to reveal the factor structure, first Exploratory Factor Analysis (EFA) was conducted. Two main criteria were taken into account based on which an item was deleted or considered for the further research (Hair et al. 2006):

- Factor loadings should be at least 0,40;
- There should be no cross-loadings on the same factor with the values more than 0,40.

Finally, based on the results of the EFA, Confirmatory Factor Analysis (CFA) was conducted, that allowed to verify the factor structure found in the EFA by means of deleting or unifying two or more of the items. CFA represents the last criterion for the structural refinement of the organizational climate measurement tool. These four steps represent an iterative refinement process of the new organizational climate measurement tool.

5.3.Reliability Analysis

The results of the reliability analysis per climate dimension can be seen in Table 5.1.

Table 5.1. Reliability analysis of climate dimensions (N=88).

Number	Dimension	CVF Quadrant	N. of Items per Dimension	Current Alpha	Improved Alpha	N. of Items to Delete
1	Autonomy	Human Relations	5	0,73		
2	Involvement/Participation		5	0,676	0,688	1
3	Cohesion		5	0,802		
4	Commitment		4	0,746		
5	Integration/Information sharing		4	0,544	0,66	1
6	Management support		6	0,821		
7	Training/Self-expression		6	0,742		
8	Welfare		5	0,823		
9	Outward Focus	Open Systems	5	0,688		
10	Innovation and Flexibility		6	0,711		
11	Reflexivity		4	0,619	0,644	1
12	Future orientation		4	**0,479**	**0,496**	1
13	Job Challenge		5	0,75		
14	Job Security	Operational Excellence	4	**0,235**	**0,333**	1
15	Formalization and Rules		7	0,747		
16	Routinization		3	0,612		
17	Stability		3	0,502	0,558	1
18	Tradition		4	0,499	0,517	1
19	Organizational clarity	Rational Goal	6	0,914		
20	Reward/Recognition		4	0,732		
21	Pressure to Produce		5	0,811		
22	Efficiency		5	0,678	0,711	2
23	Performance Feedback		4	0,678	0,751	1
24	Effort/Contribution		6	0,673		
25	Quality		4	0,731		

Table 5.1 presents the results of the reliability analysis for each of the twenty five climate dimensions. Furthermore, Cronbach Alpha values for each climate dimension and their possible improved values after one or more of the items are deleted can be found in this table. However, it was decided to refrain from deleting the items that were derived from the Patterson et al (2006) research before their correlations and factor structure will be verified in the further steps of the refinement procedure. Another column of the table shows the number of items per every climate dimension. It was decided to keep a minimum of three items for each of the climate dimensions with the lowest possible improved Cronbach Alpha value of 0,6 to be able to ensure the validity of the particular scale (Hair et al, 2006). Thus, based on the above mentioned criteria the dimensions Job Security and Future Orientation showed improved Cronbach Alpha values below a 0,6 limit. Therefore, it was decided to exclude both dimensions from the further analysis in order to assure the reliability of the data.

However, scales from the Operational Excellence quadrant Tradition and Stability - were considered for the further analysis despite their low Cronbach Alpha values. The reason for this was the limited number of dimensions within this particular CVF quadrant. Therefore, in order to be able to perform the validation of the climate dimensions within every CVF dimension it was decided to keep those two climate dimensions and consider them for the possible deletion after the rest of the statistical analysis will be performed.

5.4. Correlations Analysis

In the next step of the refinement procedure the correlations between the items within each of the climate dimensions were examined. This analysis helped to reveal whether the chosen items indeed measured a certain climate dimension. In case of correlations being above 0,8 or below 0,3 (Hair, 2006) it was suggested to unify those items with each other or to choose one item which corresponds more to this particular climate dimension.

Furthermore, the correlations between organizational climate dimensions within each of the CVF quadrants were investigated. The results of this analysis can be found in the Table 5.2.

				Human Relations								Operational Excellence				Open Systems				Rational Goal						
N	Variables	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Autonomy	4,64	0,74	0,73																						
2	Integration	4,40	0,66	,279**	0,66																					
3	Involvement	4,02	0,76	,268*	,479**	0,69																				
4	Training	3,80	0,82	.171	,326**	,41**	0,74																			
5	Welfare	4,72	0,83	,416**	,395**	,634**	,635**	0,82																		
6	Cohesion	5,06	0,73	,747**	,796**	,601**	,396**	,699**	0,80																	
7	Commitment	4,92	0,76	,669**	,640**	,527**	,713**	,611**	,861**	0,75																
8	Management Support	4,37	0,72	,386**	,495**	,587**	,626**	,689**	,702**	,686**	0,82															
9	Formalization and Rules	2,87	0,77	-,600**	-,218*	-,221*	.01	-,304**	-,318**	-,357**	-,327**	0,75														
10	Tradition	3,50	0,79	.67	-,251*	.02	-,228*	-0,1	.089	.78	-,229*	0,111	0,50													
11	Routinization	2,62	0,78	-,446**	-,338**	-,311**	-,433**	-,488**	-,448**	-,459**	-,426**	,485**	,334**	0,61												
12	Stability	3,32	0,69	-,267*	,370**	,519**	.404	.089	.088	.877	.86	,443**	,311**	,348**	0,50											
13	Innovation & Flexibility	3,93	0,68	0,2	,389**	,605**	,585**	,528**	,460**	,462**	,645**	-,223*	-,322**	-,391**	-,264*	0,71										
14	Outward Focus	3,79	0,51	.07	.02	,257*	,257*	.09	.90	,248*	,299**	.53	,516**	-,312**	-,348**	,566**	0,69									
15	Reflexivity	3,76	0,68	,268*	,314**	,584**	,491**	,513**	,552**	,516**	,526**	-,433**	,272*	-,317**	,210*	,513**	,532*	0,64								
16	Job Challenge	4,20	0,76	,219*	,210*	,546**	,368**	,416**	,449**	,418**	,453**	.404	,449**	,449**	,342**	,476**	,311**	,654**	0,75							
17	Organizational Clarity	4,07	0,92	-0,097	,342**	,396**	,231*	,279**	,296**	,306**	,457**	,585**	,279**	,296**	,302**	,469**	,380**	,345**	,392**	0,91						
18	Efficiency	3,41	0,74	,479**	,302**	,333**	,286**	,373**	,623**	,695**	,426**	.75	,373**	-,369**	,281**	,381**	,375**	,387**	,437**	,254*	0,71					
19	Effort/ Contribution	4,73	0,66	.08	,281**	,485**	,457**	,459**	,306**	,370**	,519**	.08	,459**	-,333**	.098	,527**	,340**	,585**	,486**	,447**	,306**	0,67				
20	Performance Feedback	3,62	0,88	.907	.098	.09	.909	,448**	,237*	,272*	.53	,272*	,448**	,334**	,448**	,509**	0,18	0,022	0,09	,55**	,614**	,55**	0,75			
21	Pressure to Produce	4,36	0,95	.078	,410**	,407**	,470**	,468**	,493**	,564**	,564**	.08	-,223*	-,327**	,462**	,547**	,400**	,455**	,473**	,559**	,666**	,528**	,395**	0,81		
22	Quality	4,66	0,66	.173	,438**	,535**	,567**	,606**	,391**	,368**	,536**	-,245*	-0,15	-,366**	,342**	,504**	,234*	,462**	,330**	,260*	,621*	,542**	,796**	,480**	0,73	
23	Reward/ Contribution	3,91	0,84	,351**	,418**	,421**	,395**	,334**	,448**	,509**	,539**	-,279**	-,251*	-,609**	-0,166	,473**	,307**	,342**	,351**	,562**	,441**	,55**	,669**	,459**	0,448*	0,73

Notes: N= 88 respondents

* p < .10 (*. Correlation is significant at the 0.10 level, 2-tailed).

** p < .05 (**. Correlation is significant at the 0.05 level, 2-tailed).

Table 5.2. General Correlations Table.

Table 5.2 shows correlations between items within each CVF quadrant. According to Patterson et al (2006) the correlations between single items within one quadrant should be in the range of [0,3-0,8]. It allows to conclude that items have a strong enough correlation with each other to be assigned to one quadrant. On the other hand, too low or too high correlations might result in the fact that items either measure the same thing or are totally uncorrelated and, thus, do not belong together within CVF quadrant.

The first column of the Table 5.2 shows means and standard deviations values for every organizational climate dimension. They give an indication about the importance of a certain climate dimension within the organization. For example, Management Support showed the mean value of 4.37 which implies that people in Hay Group receive good support from the managers and supervisors during their work creating the perception of strong presence of this particular climate dimension within the organization. On the contrary, such dimensions as Routinization or Formalization and Rules show relatively low mean scores only 2,62 and 2,87 respectively. It makes us to conclude that the perception of the employees of these values of Operational Excellence quadrant is very low and the respondents hardly experience a climate of this particular quadrant. The implications of the mean scores per every climate dimension are discussed in detail in the example of Chapter 5.2.

5.5. Factor Analysis

For the complete verification if these dimensions belong to one CVF quadrant or maybe some of their items should be transferred to the constructs of the other CVF quadrant a factor analysis will be conducted to reveal the factor structure of the climate dimensions. First, Exploratory Factor Analysis (EFA) will be performed. It will allow to evaluate the construct validity and to check whether the discovered factors are correlated (Stapleton, 1997).

Because of the relatively small sample size (88 respondents) it is hard to conduct an effective EFA, using all 25 climate dimensions at once and checking how particular items load on each of the factors (Hair, 2006). That is why it was decided to conduct an Exploratory Factor Analysis with SPSS per each CVF quadrant separately to reveal factor structure within four quadrants. During EFA it will be checked per item whether its factor loadings exceeds the cut-off value of 0,4 and whether there are no cross-loadings with another factors. For the EFA the Varian orthogonal rotation method was chosen in order to make sure that the factors are held as independent as possible to avoid them measuring the same construct (Hair, 2006).

In order to verify the new revealed after EFA factor structure a Confirmatory Factor Analysis (CFA) was performed using statistical Software Mplus for the assessment of the measurement properties of the items (Muthen &Muthen, 2007). It will be the last step in the refinement procedure of the organizational climate measurement tool. CFA is considered to be the best validation method for the verification of the hypothesized factor structure in order to confirm the theoretical constructs (Brown, 2006). In this study we already had a clear factor structure with a fixed number of items per each climate dimension (see Climate Dimensions Matrix, Table 4.5). Therefore, CFA is considered to be an appropriate statistical technique to confirm this hypothesized structure of the organizational climate measurement tool and to adjust it according to the CFA outcomes. Thus, in case of differences in the results obtained after EFA and CFA, the priority will be given to the CFA outcomes. Because of the limited sample size (N=88), it was decided to test the factor structure with no more than three factors at once. This condition would allow to preserve the validity of data.

5.6 Example of the refinement process of the organizational climate measurement tool

In the next part of this chapter the refinement steps will be discussed in more detail. Several dimensions from each of the four CVF quadrants will be chosen in order to perform the statistical refinement procedure. Because of the relatively small sample size it is difficult to perform feasible statistical analyses using the items from all the dimensions within each CVF quadrant Therefore, it was decided to choose several climate dimensions from every quadrant which will serve as an example of the refinement process in this study.

Criteria for the dimensions choice were based on the outcomes of the Reliability Analysis (see Table 5.1) for each climate dimension and on the outcomes of the Correlation Matrix (see Table 5.2), from which primarily the dimensions with relatively strong and low correlations were considered for the factor analysis. It would help to reveal the existing factor structure between those dimensions and to verify whether the items from them have to be united into one construct or deleted ensuring the validity of the data.

5.6.1. Human Relations Quadrant

Within Human Relations Quadrant the climate dimensions of Involvement/Participation, Training, Cohesion and Commitment will be used as the examples for the refinement procedure of the organizational climate measurement tool.

Based on the results of the reliability analysis (see Table 5.1) Involvement/Participation showed the Cronbach Aphla value of .676, that could be increased to .688 if item A 99: "There are seldom breakdowns in communication here" is deleted. Training, Cohesion and Commitment showed the reliability Cronbach Alpha values of .78; .87 and .82 that corresponded to the lower cut-off values of .60. That is why no further adjustments in the items structure for the tool's refinement were undertaken.

The majority of correlations between single items within four dimensions of the Human Relations quadrant were found in the range of 0,3-0,8. However, since the following analysis deals with bi-variate correlations whiach are not completely the best indicator of the validated scale (Vocht, 2000), it was decided to keep them in the data set for the further investigation in the exploratory and confirmatory factor analysis that will be discussed later in this chapter.

Based on the Correlations Table 5.2 the climate dimensions of Involvement/Participation and Training showed rather low correlations with another dimensions of the quadrant (most of them lie below 0,5). Another two dimensions of Cohesion and Commitment correlated quite highly with each other (the majority of correlations are above 0,5).

Further on, an Exploratory Factor Analysis was conducted in SPSS with the following four climate dimensions from the Human Relations quadrant. The Varimax factor rotation method was chosen; all factor loadings were sorted from the highest to the lowest one.

Table 5.3. Exploratory Factor Analysis within dimensions of Human Relations Quadrant

Items	1	2	3
A89.[CO] People tend to get along with each other well	0,86		
A40.[CO] A very friendly atmosphere prevails among people in this organization	0,85		
A44.[CM] Employees are emotionally attached and identify themselves with the organization	0,81		

A112.[CM] Employees feel themselves socially affiliated with the organization	0,78		
A128.[CM] People remain committed to the organization over a long period of time	0,77		
A26.[T] People are properly trained when new developments are introduced		0,83	
A41.[T] People are strongly encouraged to develop their new skills		0,82	
A25.[T] In this organization training is always offered at the right moment		0,82	
A81.[IP]R People often feel that decisions are being taken over their heads			0,79
A99.[IP] There are seldom breakdowns in communication here			0,61
A9.[IP] Changes are made only after talking to people involved in them			0,60
Eigenvalue	3.08	2.26	1.95
% Variance Explained	28.98	27.65	25.34

Table 5.3 shows the final outcome of the EFA after six iterations of the refinement procedure. During these iterations the items that had factor loadings lower than 0,4 or significant cross-loading on two or more other factors were deleted from the further analysis (Hair, 2006). As a result, three factors with factor loadings above 0,6 can be seen in Table 5.3. Most of the items from Cohesion and Commitment showed high loadings on one factor. It can be explained by rather high correlations between these two climate dimensions which were found in the Correlations Table (Table 5.2). Thus, it was decided to unite them in one dimension under the new label "Commitment/Cohesion" [CO].

In the next step CFA was performed, where the fit indices of the specified factor model, construct reliabilities of the scales and confirmatory factor loadings with t-values for each item of the four climate dimensions were investigated. The Mplus output of the CFA can be found in Appendix 5. Table 5.4 gives a short summary of the CFA results with fit indices and finalized scale after the refinement procedure.

Table 5.4. Confirmatory Factor Analyses for Human Relations quadrant (N=88)

Measures			**Loadings**	**t-value**
Fit Indices		Chi Square (df)=104,3 (87); RMSEA= 0,075, CFI=0,92; TLI=0,904		
1	**Involvement/ Participation**			
		1. People often feel that decisions are being taken over their heads (A 81).	0,40	
		2. There are seldom breakdowns in communication here (A99).	0,48	2,26

		3. Changes are made only after talking to people involved in them (A9).	0,74	2,26
		4. Information is widely shared (A 11)	0,46	3,57
		5. Management involve people when decisions are made that affect them (A49)	0,78	4,97
2	**Training**			
		1. Training is always offered at the right moment at this organization (A25)	0,47	
		2.People receive sufficient training when it comes to using new services (A41)	0,73	3,38
		3. People are strongly encouraged to develop their skills (A47)	0,55	3,08
		4. This organization gives to people only the minimum amount of training they need to do their job (A3)	0,57	3,12
		5. Training offered here always corresponds to the current needs of the employees (A102)	0,45	3,26
3	**Commitment/ Cohesion**			
		1. People tend to get along with each other well (A89)	0,56	
		4. People always take personal interest in one another (A40)	0,47	3,0
		5. Most of the people seem to be especially considerable of others (A124)	0,7	3,3
		6. Employees are emotionally attached and feel themselves affiliated to the organization they are working in (A 103)	0,64	3,26
		7. People remain committed to the organization over a long period of time (A112)	0,7	3,02

Notes: all t-values are significant at p<0, 05;

At first, several iterations were performed with items from originally four climate dimensions: Involvement/Participation, Training; Cohesion and Commitment. However, the CFA results showed a bad model fit in terms of the obtained fit indices, where RMSEA was found to be 0.09 and CFI and TLI 0.76 and 0.71 respectively. These obtained results indicated a bad model fit, therefore, it was decided to unite the items from Cohesion and Commitment dimensions as it was made in the EFA. After a number of iterations with the new model the Mplus results indicated a better model fit with three climate dimensions where items of Cohesion and Commitment were united together into one dimension under the label "Commitment/Cohesion".

While fixing the first parameter Mplus does not calculate its standard error that is why the first estimate for standard error is always zero in this case.

The new refined model for the dimensions of Human Relations quadrant can be found in the Table 5.4. The obtained results indicate the overall model Chi-Square being 104,3 with 87 degrees of freedom (p=.04). According to Brown et al (2006) it is important to rely upon at least one absolute fit index and one incremental fit index while assessing the measurement model validity of the CFA results. The value of RMSEA, an absolute fit index is 0,075. This value appears to be quite low and is below the .08 cut-off value. Using the 90% confidence interval for this RMSEA, we conclude the true value of RMSEA is between 0.00 and 0.071. Thus, even the upper bound of RMSEA is low in this case confirming a good model fit. The CFI is an

incremental fit index. Its value of 0.92 exceeds the CFI cut-off value of 0.9, supporting the model fit. TLI index value is 0.904 which is above 0.9 and is also indicating a good model fit. Furthermore, it is important that all of the factor loadings will have the values above 0,4 limit and the t-values will lie beyond the range of [-2; 2] for them to be significant (Hair, 2006). Based on the last column of the Table 5.4 we can see that the model corresponds to this requirement.

Thus, based on the CFA results for the climate dimension Involvement/Participation five items were included in this scale. It is two items more than the result of the EFA, where only three items were included in this scale without A11:"Information is widely shared" and A49: "Management involves people when decisions are made that affect them". Similarly, for the Training two more extra items were added to the scale, such as A 3: "This organization gives to people only the minimum amount of training they need to do their job" and A 102: "Training offered here always corresponds to the current needs of the employees ". Furthermore, item A 26 was exchanged for A 47: "People are strongly encouraged to develop their skills". Finally, the new dimension "Commitment/ Cohesion" remained with the same number of five items as it was found in the EFA. However two items of A44 and A128 were exchanged for A 103:" Employees are emotionally attached and feel themselves affiliated to the organization they are working in" and A112: " People remain committed to the organization over a long period of time".

5.6.2. Operational Excellence Quadrant

The dimensions of Rules and Formalization, Routinization and Tradition were considered for the example of the refinement procedure within Operational Excellence quadrant.

The reliability analysis from Table 5.1 showed that Routinization and Tradition with their Cronbach Alpha values .61 and .74 respectively lies above the cut-off value of .6. Tradition, however, indicated rather low Cronbach Alpha of .51. Because of the low number of dimensions within this particular CVF quadrant it was decided to keep this dimension for the further analysis and to check its correlations and factor structure with two the other climate dimensions.

Similarly to the previous quadrants the majority of correlations between single items within three dimensions from Operational Goal quadrant which were used for this example were found to lie in the range of [0.3 – 0.8].

Based on the results from Table 5.2, one can see that correlations between the four dimensions within Operational Excellence are rather low: most of the lie in the range between [0,3 - 0,5]. It is rather difficult to make any exact conclusions about the items' significance based only on the results of the correlations table. Therefore, in order to check whether the items within those dimensions load on one or several factors factor analysis will be conducted. The outcomes of the EFA as the next step of the refinement procedure can be found in Table 5.5.

Table 5.5. Exploratory Factor Analysis within dimensions of Operational Excellence Quadrant

Items	Factor Loadings		
	1	2	3
A80.[R] It is considered very important here to follow the rules	0,82		
A58.[R] Everything has to be done according to the rules	0,77		
A82.[R] People have always to ask for the permission before deviating from common policies or practices	0,70		

A38.[R] Clearly defined and structured rules are very important here	0,61		
A110.[R]R. People can ignore here formal procedures if it helps to get the job done	0,51		
A104.[RO] Employees do the same kind of job most of the time		0,81	
A34.[RO] R. Job requires employees to perform different tasks		0,61	
A8.[RO] Employees' daily job has the same repetitive character all the time		0,60	
A59.[RO] Employees get little chance to change their job tasks		0,52	
A31.[TR] Changes in the way things are done here happen very slow			0,79
A52.[TR] Managers value to stick to the traditional ways of doing things			0,65
A27 [TR] Traditional and established way of doing things is considered to be the most effective and reliable working policy in this organization			0.63
Eigenvalue	4.08	3.56	2.85
% Variance Explained	30.98	27.48	26.54

The outcomes of the Table 5.5 indicate a three-factor structure. EFA was completed with six iterations during which those items that had factor loadings lower than 0.4 or high cross loadings on one or more other factor were excluded from the further analysis (Hair, 2006). Rules and Formalization maintained five items from the original set of seven that showed rather high loadings on one factor, confirming the hypothesized factor structure.

In the next step of the refinement procedure CFA was performed, investigating the fit indices of the pre-specified three-factor model for Operational Excellence quadrant, construct reliabilities of the scales and factor loading with t-values for each item. The original Mplus output of the CFA can be found in the Appendix 5. Table 5.6 shows the short summary of the main CFA results.

Table 5.6. Confirmatory Factor Analyses for Operational Excellence quadrant (N=88)

Measures			**Loadings**	**t-value**
Fit Indices		Chi Square (df)=215.5 (164); RMSEA= 0,060, CFI=0,92; TLI=0,904		
1	**Formalization & Rules**			
		1. [R] Clearly defined and structured rules are very important here (A 38).	0,58	
		2. Everything has to be done according to the rules (A58).	0,77	5.23
		3. It is considered very important here to follow the rules (A80).	0,72	5.03

		4. People have always to ask for a permission before deviating from common practices (A 82)	0,67	4.8
		5. R. People can ignore here formal procedures if it helps to get the job done (A110)	0,53	4,09
2	**Tradition**			
		1. Management value to stick to traditional ways of doing things (A8)	0,46	
		2. Managers value to stick to the traditional ways of doing things (A52)	0,47	2,29
		3. Traditional and established way of doing things is considered to be the most effective and reliable working policy in this organization (A27)	0,52	2,03
3	**Routinization**			
		1. Employees' daily job has the same repetitive character all the time (A8)	0,52	
		2. Employees get little chance to change their job tasks (A59)	0,63	3,9
		3. Employees tasks vary a lot in this organization (A104)	0,43	3,09
4	**Stability**			
		1. The work here is done in a fixed and established way (A36)	0.48	
		2. Stability in the way the things are done here is very appreciated (A69)	0.69	3.7
		3. Managers value permanent and unchanging work tempo here (A86)	0.56	4.5

Notes: all t-values are significant at p<0, 05;

At first, several iterations were performed with items from originally three climate dimensions that were used during EFA: Rules and Formalization, Routinization and Tradition. However, the CFA Mplus outcomes did not show a good model fit in terms of the obtained fit indices. Therefore, it was decided to consider all four climate dimensions of this quadrant for the CFA, adding the dimension of Stability for the further analysis. Furthermore, the number of items within Routinization dimensions was decreased from four to three. Within Tradition dimension item A31 was exchanged with the item A8 what allowed to obtain a good model fit for CFA.

The new refined model for the four dimensions of Operational Excellence quadrant can be found in the Table 5.6. The obtained results indicate the overall model Chi-Square being 215,5 with 164 degrees of freedom (p=.0043). The value of RMSEA was found to be .060 which is below the cut-off value of .08. The CFI and TLI fit indices had the values of 0.92 and 0.904 respectively, lying above the cut-off value of 0,9 what indicated a good model fit.

Furthermore, it is important that all of the factor loadings will have the values above 0,4 limit and the t-values will lie beyond the range of [-2; 2] for them to be significant (Hair, 2006). From the last column of the Table 5.6 we can see that the model corresponds to this requirement.

Thus, based on the CFA results the structure of Operational Excellence quadrant was refined including four climate dimensions within it.

5.6.3. Open System Quadrant

For this quadrant the dimensions of Job Challenge, Outward Focus and Innovation/Flexibility were be used to perform the refinement of the organizational climate measurement tool. The reliability analysis results form Table 5.1 showed that all three dimensions had quite high Cronbach Alpha values. Thus, Cronbach Alpha of Job Challenge was .75; Outward Focus and Innovation & Flexibility scored .68 and .71 respectively, which lies above the cut-off value of .06.

In terms of correlations between single items within these three dimensions, all of the correlations values lied in the range of [0.3 – 0.8]. Based on the outcomes of the Table 5.2 for the dimensions of the Open System quadrant most of the correlations between the climate dimensions within the quadrant lie in the range between [0,4-0,75]. In order to be able to make more specific conclusions about the factor structure of the following dimensions factor analysis will be performed. EFA is the next step of the refinement procedure. Its outcomes about three climate dimensions can be found in Table 5.7.

Table 5.7. Exploratory Factor Analysis within dimensions of Open System Quadrant

Items	Factor Loadings		
	1	2	3
A111.[JC]R Employees always have to perform tasks which are lower than their qualification and knowledge level	0,53		
A4.[JC] Most of the activities present a real personal challenge	0,82		
A32.[JC] Employees need to use all their skills and capacities to be able to perform their job	0,80		
A109.[JC] Employees are provided with new challengeable tasks on their job	0,77		
A113.[OF] Organization is constantly looking for new opportunities on the market		0,77	
A37 [OF] Customers needs are considered top priority here		0.75	
A88 [OF] This organization is very quick to respond to the needs of the customers		0.50	
A100.[IF] This organization is very flexible; it can quickly change procedures to adapt to new circumstances and to solve problems as they arise			0.72
A95.[IF] Management here are quick to spot the need to do the things differently			0.83
A24.[IF] New ideas are readily accepted and encouraged here			0.71
Eigenvalue	3.06	2.76	2.35
% Variance Explained	27.3	25.21	22.54

The following EFA was completed within six iterations during which the items that had factor loadings lower than 0.4 or high cross loadings on one or more other factor were excluded from the further analysis (Hair, 2006). Job Challenge dimension maintained four items from the original set of five that showed rather high loadings on one factor, confirming the hypothesized factor structure. Both Outward Focus and Innovation & Flexibility maintained three items in each factor instead the original number of five items for Outward Focus and six items for Innovation & Flexibility.

In order to confirm the three-factor structure for the refinement example for this CVF quadrant a CFA was performed. It investigates the fit indices of the pre-specified three-factor model, construct reliabilities of the scales and factor loading with t-values for each item. The original Mplus output of the CFA can be found in the Appendix 5. Table 5.8 shows the short summary of the main CFA results.

Table 5.8. Confirmatory Factor Analyses for Open System quadrant (N=88)

Measures			**Loadings**	**t-value**
Fit Indices		Chi Square (df)=95.5 (62); RMSEA= 0,062, CFI=0,91; TLI=0,90		
1	**Innovation & Flexibility**			
		1. [R] This organization is very flexible; it can quickly change procedures to adapt to new circumstances and to solve problems as they arise (A 100).	0,45	
		2. Assistance in developing new ideas is readily available (A75).	0,62	3.7
		3. New ideas are readily accepted and encouraged here (A24).	0,46	3.1
		4. People in this organization are always searching for new ways of looking at the problems (A 20)	0,53	3.4
		5. This organization is quick to respond when changes need to be made (A6)	0,46	3,2
2	**Outward Focus**			
		1. Customers needs are considered top priority here (A37)	0,45	
		2. Organization is constantly looking for new opportunities on the market (A113)	0,51	3,37
		3. Way of improving service for the customers are always thoroughly thought (A117)	0,50	3,87
3	**Job Challenge**			
		1. Most of the activities present a real personal challenge (A4)	0.47	
		2. Employees need to use all their skills and capacities to be able to perform their job (A32)	0.672	2.6

		3. Employees are provided with sufficient amount of challenge and variety in their jobs (A39)	0.53	2.02

Notes: all t-values are significant at p<0, 05;

Table 5.8 indicated the results of CFA for the four-factor model of the Open System quadrant that was previously tested by EFA. CFA confirmed the hypothesized three-factor structure; however, the number of items per each climate dimension was changed. Thus, Job Challenge maintained three items from originally four from EFA; Outward Focus remained with its three items and Innovation & Flexibility was extended by two new items from originally three in EFA till five after CFA. Tables 5.7 and 5.8 provide a detailed overview of the obtained changes within the items' structure.

The overall model Chi-Square for Open Systems quadrant was found to be 95,5 with 62 degrees of freedom (p= .004). The value of RMSEA is .062 which is below the cut-off value of .08. The CFI and TLI fit indices had the values of 0.91 and 0.90 respectively, lying above the cut-off value of 0,9 and indicated a good model fit.

Furthermore, based on two last columns of the Table 5.8 all of the factor loadings have their values above 0,4 limit and the t-values are beyond the range of [-2; 2] indicating their significance (Hair, 2006). Thus, based on the CFA results the structure of Open System quadrant was refined including three climate dimensions within it.

5.6.4. Rational Goal Quadrant

The dimensions of Pressure to Produce, Quality and Efficiency were considered for the example of the refinement procedure Rational Goal quadrant.

Based on the results of the reliability analysis (see Table 5. 1) Pressure to Produce showed the highest Cronbach Alpha value of .811; Quality and Efficiency scored lower indicating Cronbach Alpha values of .731 and .678 respectively. After deleting two items from Efficiency dimension its Cronbach Alpha value was increased to .711, which is above the cut-off value of .06

Similarly to the previous quadrants the majority of correlations between single items within three dimensions form Rational Goal quadrant were in the range of [0.3 – 0.8]. The correlations between the climate dimensions within the quadrant were also found to lie in the range between [0,4-0,75]. In order to be able to make more specific conclusions about the factor structure of the following dimensions factor analysis will be performed. As the next step of the refinement procedure, EFA was conducted with the following three dimensions from the Rational Goal quadrant. Its outcomes are presented in the Table 5.9.

Table 5.9. Exploratory Factor Analysis within dimensions of Rational Goal quadrant.

Items	Factor Loadings		
	1	2	3
A62.[PP] People are expected to do too much in a day	0,81		
A105.[PP] People here are under high pressure to meet the targets	0,74		
A46.[PP]R. In general people's workloads are not particularly demanding	0,68		

A67.[PP] Management requires people to work extremely hard	0,68		
A125.[PP]R The pace of work here is pretty relaxed	0,61		
A13.[Q] Quality is taken seriously here		0,77	
A91.[Q] Organization is always trying to achieve the highest standards of quality		0,74	
A93.[Q] People believe that organization's success depends on high-quality work		0,61	
A53.[E] The work atmosphere emphasizes efficiency and usefulness			0.55
A16.[E]R. Things could be done more efficiently if people would concentrate on their tasks			0,77
A127.[E] Time and money cold be saved if work were better organized here			0,65
Eigenvalue	2.97	2.39	1.95
% Variance Explained	27.02	21.768	19.89

Based on the outcomes of the Table 5.9 a clear three-factor structure can be seen. EFA was completed with 7 iterations during which the items that had factor loadings lower than 0.4 or high cross loadings on one or more other factor were excluded from the further analysis (Hair, 2006). Pressure to Produce maintained all five original items that showed rather high loadings on one factor, confirming the hypothesized factor structure.

However, in the case of Quality, item A5: "This organization does not have much of a reputation for top-quality products" was excluded from the analysis due to its low factor loading. Similarly, the number of items within the Efficiency dimension was reduced form originally seven to three which were found significant in terms of their high loadings on one factor.

In the next step of the refinement procedure CFA was performed, investigating the fit indices of the pre-specified three-factor model for Rational Goal quadrant, construct reliabilities of the scales and factor loading with t-values for each item. The original Mplus output of the CFA can be found in the Appendix 5. Table 5.10 shows a short summary of the main CFA results.

Table 5.10. Confirmatory Factor Analyses for Rational Goal quadrant (N=88)

Measures		**Loadings**	**t-value**
Fit Indices	Chi Square (df)=78.15 (62); RMSEA= 0,056, CFI=0,934; TLI=0,917		
1 **Efficiency**			
	1. Efficiency is important for this organization (A 18).	0,60	
	2. Good scheduling and planning assists in meeting the targets in this organization (A21).	0,70	4.5

		3. The way the jobs are organized and planned in this organization is very efficient (A33).	0,53	3.8
		4. People here are generally efficient and successful in their job (A 92)	0,51	3.6
2	**Quality**			
		1. Quality is taken seriously here (A13)	0,81	
		2. Organization is always trying to achieve the highest standards of quality (A91)	0,78	6.9
		3. People believe that organization's success depends on high-quality work (A93)	0,68	6.13
		4. R. This organization does not have much of a reputation for high quality products (A5)	0.53	3.38
3	**Pressure to produce**			
		1. People are expected to do too much in a day (A62)	0,6	
		4. R. The pace of work here is pretty relaxed (A125)	0,4	3,5

Notes: all t-values are significant at p<0, 05;

Table 5.10 presents a short summary of the CFA output results for the Rational Goal quadrant. CFA confirmed the hypothesized three-factor structure; however, the number of items per each climate dimension was changed. Thus, Efficiency with Quality increased for one more item from originally three items found after EFA. On the other hand, Pressure to produce showed a good model fit only after reducing the number of items within this climate dimension from originally five found in EFA till only two.

Quality maintained three items from originally four from EFA; Outward Focus remained with its three items and Innovation & Flexibility was extended by two new items from originally three in EFA till five after CFA. Tables 5.9 and 5.10 provide a detailed overview of the obtained changes within the items' structure.

The overall model Chi-Square for Rational Goal quadrant was found to be 78,13 with 62 degrees of freedom (p=.042). The value of RMSEA is .056 which is below the cut-off value of .08. The CFI and TLI fit indices showed the values of 0.93 and 0.91 respectively, lying above the cut-off value of 0,9 and indicated a good model fit. Furthermore, based on two last columns of the Table 5.8 all of the factor loadings have their values above 0,4 limit and the t-values are beyond the range of [-2; 2] indicating their significance (Hair, 2006). Thus, based on the CFA results the structure of Rational Goal quadrant was refined including three climate dimensions within it.

The following analysis provided guidelines and a detailed description of how the validation and refinement procedure of the organizational climate measurement tool was performed within each of the CVF quadrants.

Based on the results of the EFA and CFA a good level of quality of the new organizational climate measurement tool could be observed. However, the fact that the tool's validation was performed using the sample size from only one organization showed a certain limitations in its validation results. Therefore, in order to achieve the efficiency and high quality of the new organizational climate measurement tool, it is important to perform its further implementation within various organizational environments. It will assist to conduct a more refined validation procedure, making it possible to apply this measurement instrument within any organizational

setting in future. The rest of the general conclusions, limitations and implications of the tool's usage can be found in the final Chapter 8 of this study.

5.2 Implementation of organizational climate measurement tool with Hay Group

In this section a detailed example from Hay Group will be discussed which shows how the tool can actually be used in practice.

Phase 1: CVF definition.

As the starting point in-take meeting with the management of the Hay Group was conducted, where three people from the management of the organization were present. The main goal of this meeting was to present the concept of the Competing Values Framework (CVF) as one of the guidelines for defining an effective environment for organizational work and performance. During this meeting the main mission and vision of Hay Group was discussed. Furthermore, the company's management received a detailed description of each of four quadrants of the CVF framework, with their main characteristics, effectiveness criteria and examples of companies which successfully operate in each of the quadrants. At the end of the session the management was asked to agree upon one CVF quadrant in which their organization operates and works at this moment. The idea of equality of each of the quadrants in terms of their effectiveness and prestige was emphasized in order to avoid the bias for having the "best" and the "worst" quadrant to work in. The OCAI instrument, developed by Cameron and Quinn (1999) was used to diagnose the type of quadrant where management perceives Hay Group to be operating and working. As the outcome of this meeting the Open System quadrant was defined by the company's management as the main quadrant where Hay Group primarily works and operates. The Human Resources Quadrant got the second highest score, the Rational Goal Quadrant was on the third place and, finally, the Operation Excellence Quadrant was assigned to the last position. See Table 5.11 for the general results presentation.

Table 5.11. Comparison of management and employees' view on the organizational climate within Hay Group

N	CVF Quadrant	Mean Score per Quadrant (Employees)	Mean Score per Quadrant (Management)
1	Open System	3,98	4,8
2	Rational Goal	4,13	3,8
3	Operational Excellence	3,04	3,1
4	Human Relations	4,94	4,2

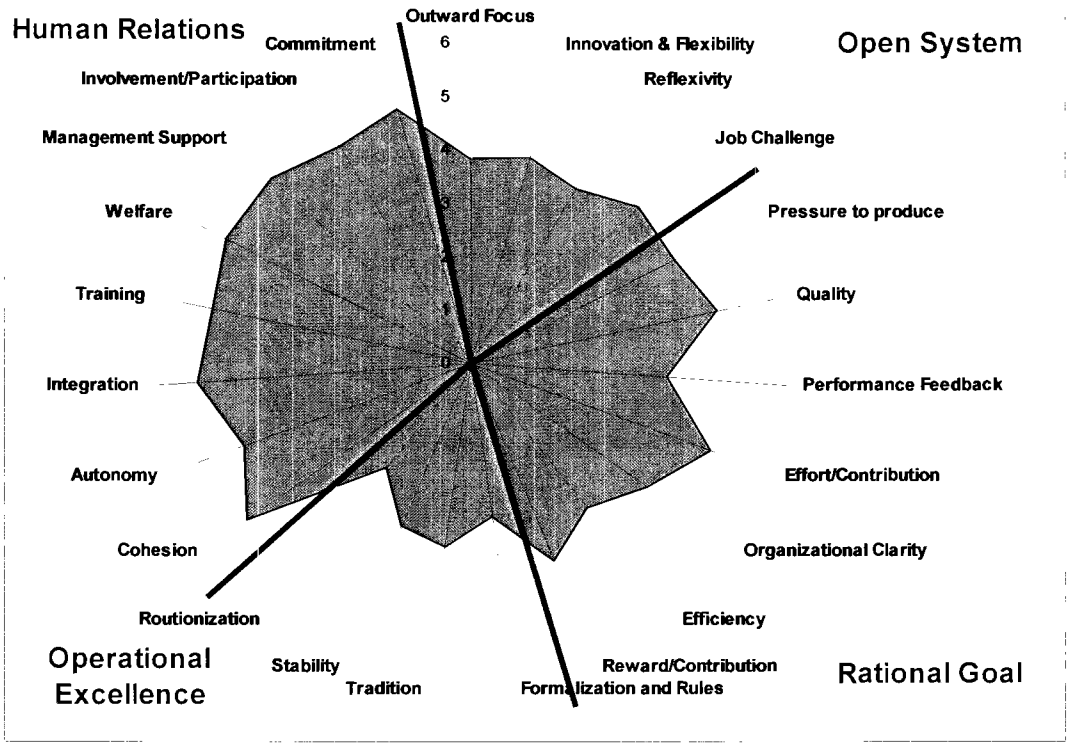
Note: N (Employees) =90; N (Management) = 3.

Phase 2: Use of Organizational Climate Survey

In the second phase, the organizational climate survey was disseminated among the employees of the Hay Group. The final sample size of the completed surveys for the validation of this example reached 88 employees.

The results of the organizational climate survey can be found in Figure 6 which gives a graphical presentation of the mean scores for each climate dimension within four CVF quadrants obtained from the results of the organizational climate survey within Hay Group.

Figure 5.1. Spider Diagram of the Climate Scores per CVF Quadrant



Based on the Figure 5.1 and data from Table 5.11 one can see that Hay Group is primarily located in **Human Relations**, with a mean score of 4,94. This quadrant is characterized by shared values and goals, feeling of cohesion, participativeness and a sense of we-ness between employees (Cameron and Quinn, 1999). According to the research of Cameron and Quinn (1999) an organization in this quadrant as a very friendly place to work, where people share a lot of themselves. Such organization might be compared with an extended family that places emphasize on teamwork, participation and consensus. It is held together by loyalty and tradition with high organizational commitment

Another quadrant, with a mean score of 4,13 is **a Rational Goal Quadrant**. This quadrant is seen by Cameron and Quinn (1999) as a result-oriented organization whose main concern is with getting the job done. Thus, competitiveness and productivity on the market is achieved through a strong emphasis on external positioning and control. It is important to set goals and targets and to move towards their achievement in this organization. The glue that holds such organization is an emphasis on winning.

The **Open System Quadrant** got a score of 3,98 within Hay group. The main emphasize of the organization that operates in this quadrant is on fostering adaptability, flexibility, and creativity where such factors as uncertainty, ambiguity and information overload are very typical. Another important challenge is to produce innovative products and services and to adapt quickly to new opportunities. In such organization one has to think of individuality, risk-taking and anticipating of the future where almost everyone becomes involved with production, clients, research and development etc.

Finally, **Operational Excellence Quadrant** has got the lowest mean score of 3,04 within Hay Group. The typical organization in this quadrant according to Cameron and Quinn (1999) is a large organization or governmental institution which is characterized by a big number of various standardized procedures, multiple hierarchical levels and wide system of management levels. In such an organization a long-term concern is focused on stability and smoothness of all operational processes. The management of employees is concerned with secure employment and predictability. Detailed mean scores for each climate dimensions can be found in Table 5.12.

Table 5.12. Summary of Mean Scores per Climate Dimension

	Climate Dimension	CVF Quadrant	Mean Score	Mean Score per Quadrant
1	Outward Focus	Open System	3,79	3,92
2	Innovation & Flexibility		3,93	
3	Reflexivity		3,76	
4	Job Challenge		4,20	
5	Pressure to produce	Rational Goal	4,36	4,11
6	Quality		4,40	
7	Performance Feedback		3,90	
8	Effort/Contribution		4,73	
9	Organizational Clarity		4,07	
10	Efficiency		3,41	
11	Reward/Contribution		3,91	
12	Formalization and Rules	Operational Excellence	2,87	3,04
13	Tradition		3,50	
14	Stability		3,30	
15	Routinization		2,50	
16	Cohesion	Human Relations	5,06	4,57
17	Autonomy		4,60	
18	Integration		4,40	
19	Training		4,50	
20	Welfare		4,72	
21	Management Support		4,37	
22	Involvement/Participation		4,02	
23	Commitment		4,92	

Such outcomes of the mean scores per CVF quadrants might be explained by the fact that Hay Group is a HR consultancy company, which is specialized in areas such as management and talent development, leadership styles, organizational climate etc. It provides consultancy services both towards external client organizations and also pays a lot of attention to the development of good participative and effective teamwork between its employees. Such management policy might have resulted in the high climate scores within ***Human Relations Quadrant.***

Another important perception of work environment by the Hay Group employees which is seen from the results of the organizational climate survey is that values and effectiveness criteria of the ***Rational Goal Quadrant*** are considered to be an important element of the perceived work environment. It can also be easily explained by the fact that Hay Group is a consultancy company, where the work pace and the dynamic character of the work assignments is much higher than in another organizations. That is why values such as goal-orientation, market leadership and emphasis on winning are very important here.

The third priority was given to the values of the ***Open System Quadrant*** by the employees of Hay Group. Such climate dimensions as Job Challenge and Innovation have shown the highest mean scores (see Figure 5.1). It can be explained by the fact that Hay Group management always tries to introduce new unconventional ways of delivering their services to the clients. Much effort is also put into the development of the new diagnostic tools to guarantee the highest level of their services to the customers. Moreover, such personal characteristics of employees as job challenge and self-initiative play an important role.

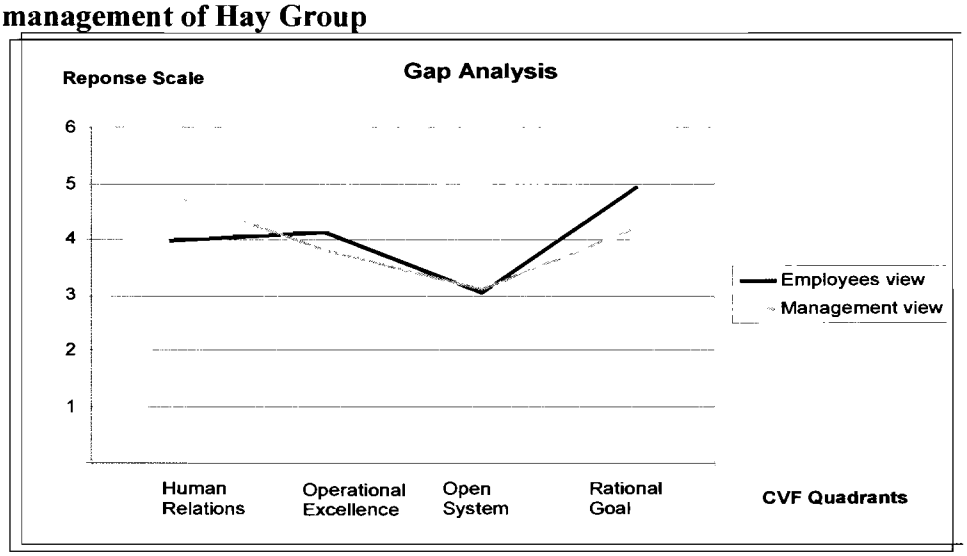
On the other hand such values from ***Operational Excellence Quadrant*** as smoothness in rules in procedures, strict following of the guidelines and procedural norms play a less important role in the view of the Hay Group's employees.

Phase 3: Gap Analysis

In the third phase of the diagnostic climate instrument's usage the results of the meeting with the management of Hay Group were compared with the outcomes of the organizational climate survey. It allowed to conduct a gap analysis between the view of the management and the employees on the organizational climate situation within the organization. The results of the mean scores for the gap analysis can be found in the Table 5.12, discussed before.

Based on these results a visual presentation of the gap analysis between the management and employees' view on the organizational climate situation within Hay Group can be made (see Figure 5.2). Thus, the main gap exists between Open System Quadrant and Human Relations Quadrant, where management views Hay Group as the organization that primarily operates in Open Systems Quadrant. However, the employees of Hay Group perceive their work environment as such belonging to the values of the Human Relations Quadrant. Another difference exists in the view on the Rational Goal Quadrant where employees see more affinity of the organization with this quadrant than the management. Finally, Operational Excellence quadrant showed similar results between employees and management.

Figure 5.2. Gap Analysis of organizational climate perception of the employees and management of Hay Group



Concrete suggestions about the interventions for diminishing the gap between the management and employees' perception of the work environment within Hay Group will be discussed in the next chapter.

Chapter 6: Interventions Design

In the previous chapter statistical refinement and validation of the organizational climate measurement tool's structure was discussed. In this chapter of the master thesis graduation project I will elaborate on the interventions design for organizational climate change. First, interventions for organizational climate change within every CVF quadrant will be described. Secondly, a specific example of the interventions design within Hay Group where the measurement tool was developed and validated will be given.

6.1. Interventions for organizational climate change in every CVF quadrant

After conducting the first phase of the organizational climate measurement tool managers obtain the vision of the current and desired situation in terms of the CVF quadrant where the organization is located at this moment and where it would like to be in future. Interventions for initiating organizational climate change in each CVF quadrant will be discussed in detail in this section. The list of the interventions should be seen more as a guideline for the further actions which can be adjusted depending on the specific circumstances (Cameron & Quinn, 1999).

A set of possible interventions for organizational climate change within each of the CVF quadrants based on the outcomes of the study of Cameron & Quinn (1999) can be found in Figure 6.1. In this chapter I will elaborate on several examples of possible intervention within each CVF; detailed interventions description can be found in the Appendix 6.

Figure 6.1. Summary of interventions for organizational climate change within every CVF (after Cameron & Quinn, 1999)

Human Relations Quadrant	Open System Quadrant
➢ Establish a 360-degree evaluation system ➢ Design career development program ➢ Institute an effective employee survey program ➢ Implement conflict management techniques ➢ Develop management training programs ➢ Support cross-functional teamwork	➢ Encourage more focus on managing the future ➢ Implement new planning policy ➢ Encourage innovation ➢ Improve organizational learning ➢ Support creativity ➢ Explore the usage of new technology
Operational Excellence Quadrant	**Rational Goal Quadrant**
➢ Improve service delivery time ➢ Make current work procedures and practices in compliance with the organizational mission and vision ➢ Conduct work process evaluation within each work unit ➢ Establish the "workout" program ➢ Implement various optimization practices within organization ➢ Implement health and safety audit ➢ Improve knowledge sharing processes within organization	➢ Review currently used organization mission and vision and their communication practices to the employees ➢ Constantly analyze market evolution and change ➢ Establish a performance improvement program ➢ Improve on customer relations ➢ Conduct competency assessment of employees and management ➢ Conduct performance evaluation

Human Relations Quadrant

One of the possible interventions for this quadrant would be to *establish a 360-degree evaluation system* in the organization. The purpose of such system would be to assess leadership practices of the senior management. Input information for it should be obtained from subordinates, peers and superiors. It is important that every senior manager including CEO would assist in collecting the information and making plans for the further improvement.

Another intervention might concern launching of a new *career development program.* It should emphasize the inter unit mobility within the organization. Furthermore, such program would foster cross-functional communication and knowledge sharing between departments and organization as a whole.

Operational Excellence Quadrant

In the case of Operational Excellence quadrant the possible intervention might concern the *Improvement of service delivery time.* In this case it is useful to conduct a detailed examination of the time it takes between customer requests for services and products and their actual delivery. Making of a detailed process chart will help to identify the bottleneck points where the delivery time can be reduced by means of more efficient work organization. Finally, concrete actions should be undertaken in order to eliminate the disturbing factors that hinder to maintain a normal service time delivery of company's services and products to the customers.

Open System Quadrant

One of the interventions in this particular quadrant would be to *encourage innovation.* This task could be accomplished in various ways. One of the possible scenarios would be to ask line-managers to conceptualize and write down their ideas and new strategies for the further organizational development. Another approach is to conduct regular brainstorming meetings with managers from various departments about the best unconventional ways of proceeding with the current business strategy development. It is very important to develop systems that would encourage, measure and reward innovative behavior at all organizational levels, involving both managers and employees of the organization.

Rational Goal Quadrant

In order to perform an effective organizational climate change within Rational Goal quadrant organizational has to *review its currently used organization mission and vision and their communication practices to the employees.* It is important to translate both mission and vision from the organizational level to the level of every work unit. In such a way both of them will become more meaningful for the employees and the whole organization.

Another intervention concerns improvements in *the customer relations* of the particular organization. For this purpose one could employ an outside marketing firm to survey customer satisfaction with the provided company's products or services. Another important task would be to assess the levels of courtesy, competence and concern that organization's employees show towards the customers. Moreover, organization might consider implementing the concept of "customer alliances" as a new way to strengthen the relationship with the largest customers. It would allow the customers to be involved and provide input into the organization's decision-making process, making them to feel more affiliated with the organization. Finally, one could conduct regular interviews with constant customers in order to obtain their current expectations and levels of satisfaction with the received services and products.

6.2. Interventions Description for Hay Group

In this chapter an example of a possible interventions' scenario for the implementation of the organizational climate change within Hay Group will be discussed. Suppose, Hay Group finds it important to move from Human Relations and Rational Goal quadrants towards Open System work environment.

As mentioned in the previous chapter, organizational climate change is quite slow iterative process that requires time and participation of all organization's stakeholders. In the specific case of Hay Group it will mean involving the changes in the management policy and employees' work environment towards more adaptability, flexibility and creativity.

One of the practical suggestions in this case would be to put more focus on the future development and growth and involve employees in this process by means of regular meetings with different teams and departments. Such meetings would be the chance for everyone to express his views and opinions about where they see Hay Group in future in terms of its development and services that they could provide to their clients. It will help to create the feeling of the organizational concern about managing the future and not living by the current activities.

Another way to move closer towards the Open Systems Quadrant would be implementation of a management policy that would recognize and foster creativity and initiative among the employees. For example, the guidelines for the visible rewards for recognizing creativity and innovation that might come from employees, teams or the whole department might be developed. In such a way people might be more interested and motivated to contribute something to the development of the new innovative unconventional ways of doing things, than just simply following the usual routine patterns within their daily work.

Finally, organizational learning is an important element in the process of the organizational climate change towards the Open System Quadrant. One possibility would be to assign a person who would be responsible for the development and practical implementation of the concept of organizational learning within Hay Group. The main responsibilities of this person would include such activities as conducting an inventory of the currently available and used learning practices within departments and various working teams of Hay Group. It will help to obtain a general overview of the learning practices within the whole organization and to assess its capacities to learn more effectively in future. It is important to identify the impediments of the learning process and immediately implement some concrete actions for their elimination.

To conclude, it is important to mention that neither of these suggestions should be contemplated as a universal rule or a kind of law for establishing an Open System work environment within Hay Group or any other company. These suggestions for the interventions are aimed to serve as a guideline for the further actions in the specific example of Hay Group.

Chapter 7. Implementation plan

The purpose of this chapter is to introduce the main guidelines for bringing to life suggested changes of organizational climate discusses in detail in previous chapter. The process of organizational climate change is quite a long and complex activity which means changing the perceptions of employees about their work and organization in general. It is important to overcome resistance and create a good environment for smooth implementation of the new changes. In this chapter alternative methods of change management will be presented and discussed. Finally, an implementation plan of the organizational climate change within Hay Group will be proposed, which is based on the interventions design performed in the previous chapter of the thesis.

7.1. Change Management principles

Before staring to implement any new changes within the organization whether in terms of movement from one CVF quadrant to another or improvement of one specific organizational climate dimension it is important to create the general awareness for the necessity of change within the organization. It is important that this necessity would be perceived by the employees not as the next new initiative of management to perform even more strict control upon the work or performance results, but rather as a way to help employees and the organization in general to work better and more efficiently. In that situation the manager has the responsibility to facilitate and enable change. His role is to interpret, communicate and enable and not to instruct and impose.

A large amount of scientific research was conducted on the topic of change management and its best implementation practices within business environment. Kotter (1995,2002) introduced a model for understanding and managing organizational change. The Change Model of Kotter (1995, 2002) can be summarized in eight subsequent steps:

Step One: Create urgency

This step implies from the managers to inspire people to move, make objectives real and relevant for them and for the company as a whole. It requires assuring an open and honest dialogue between managers and employees about the current status quo of the company and what is happening on the market place at the moment, identifying potential threats and developing scenarios that show what could happen in future. It will help to create a general picture in the peoples' mind about the necessity to change something in the current situation.

Step Two: Form a powerful coalition

It implies finding effective change leaders throughout the organization with strong emotional commitment and right mix of skills and competences. Such "change coalition" will need to work as a team, making sure that information about the need and urgency for change will be spread among all organization's stakeholders.

Step Three: Create a vision for change

It is important to combine all existing ideas and visions about the future change into one overall vision that people can understand and remember easily. This vision will serve as an indication of the further development direction of the organization. Moreover, it will help everyone to understand why certain actions are required to be taken in order to change the common way how the things are done in this organization.

Step Four: Communicate the vision:

For every vision to become reality it needs to be communicated to another people, so it will become their vision for change too and not just an instruction from the company management

that needs to be executed directly and without any objections. The statements of vision have to be communicated frequently and powerfully and embedded with daily organizational practices.

Step Five: Empower action/Remove obstacles

If all the previous steps were implemented successfully then the change vision was actively communicated to the organizational environment and accepted by it. The next step will be to introduce a clear structure for change and continuously check barriers to it. Removing all possible obstacles can empower people executing changing principles and helping the change to move forward.

Step Six: Create short-term wins

It is known that nothing motivates more than success. That is why managers have to give to the company the taste of victory early in the change process. It can be accomplished by creating short-term targets instead of setting one long-term goal. This will make each smaller target achievable with little room for failure.

Step Seven: Build on the change

Kotter (1995, 2002) argues that many change projects fail because victory is declared too early, and real change usually needs some more time. Quick wins are only the beginning of what needs to be done to achieve long-term change. Thus, each success provides an opportunity to build on what went right and identify what you can improve. Therefore, fostering and encouraging the determination and persistence of ongoing change and highlighting achieved and future milestones are the necessary elements of this step.

Step Eight: Anchoring the change within organization

Finally, in order to wrap up the process of organizational change successfully one has to make sure that this change process became the core part of the organization. Talking about the vision for change it means that it would become a part of the core of your organization, so that values behind the vision for change will be reflected in daily work practices and in every aspect of the organization.

Cameron and Quinn (1999), point out several important principles about implementation of organizational climate change within organization. The authors emphasize that organizational climate change is an iterative process that needs time and efforts both form the management and employees for its successful implementation. The main guidelines concern such points as:

1. Generate social support. Build coalitions of supporters for the change within organization and empower them. It is important to identify opinion leaders who would facilitate the process of awareness about the change process within the organization.

2. *Design follow-up and accountability.* During the change process people have to know the specific time frames for change to be completed. Thus, follow-up and reported events should be specified with developed mechanisms to ensure that people follow their commitments and assignments. It will help to monitor the incremental development of the change process.

3. Provide information. It is important during any change process that people within the organization are kept updated about the progress of the implementation plan. For this purpose information should be shared as broadly as possible, because the absence of trustworthy information makes people create their own false vision about the change process.

4. Create readiness. During any change process it is certain that resistance to it will be present among people. It is because the basic values and the way of life people have become accustomed to are being changed. Creating readiness to change may be performed by identifying the advantages of the future state and disadvantages of not changing anything and letting the things within organization proceed as they are now. The gap approach that shows a gap between current

and future required performance, can provide necessary resources for the implementation of change.

5. Focus on the processes. For change to last, it must be reflected in the core processes of the organization. It means that the process of firing, appraising and rewarding people must be adjusted to the new circumstances. In another words, such core business processes within organization as designing, engineering, manufacturing, delivering and servicing products might need to be redesigned. However, one should bear in mind that rearranging the structures or adjusting some elements within the system will not contribute to long-term success; therefore, it is necessary to perform complete process changes in the whole organization.

Thus, step by step, the organizational climate can be changed. However, this process might take from one up to several years. Organizational climate is a relatively enduring characteristic of an organization, which will need a big amount of patience and persistence from the management and employees' sides to be implemented successfully.

To conclude, one has to realize that implementation of the change management project is not a matter of one or two days. It is a continuous iterative process that requires a good structural approach and a proper foundation within the organization. The above mentioned rules are only some possible guidelines for structuring the change process. However, the management of the organization can always adjust them depending on the type of the company and specific circumstances of the market where it operates.

7.2. Description of Change in Progress for Hay Group.

This chapter is based on the discussion from Chapters 5.2 and 6.3, where an example case was elaborated of what Hay Group should have been doing if it would actually launch the process of organizational change within it. This chapter will present some general guidelines for the implementation of the organizational climate change process and bringing it into progress on the fictive example of Hay Group.

One of the first steps for the change process according to Kotter (1995, 2002) is to create urgency. In case of Hay Group it might be formulated as to create awareness of the necessity for change. Very often people are so much overwhelmed and concentrated on their daily activities that it becomes quite hard to take a look from outside at the current working practices and perceived work environment, in order to notice the necessity for the further change. The usage of the organizational climate measurement tool enabled to perform such an organizational quick scan in terms of the current organizational climate situation. Furthermore, it is important to transfer its results to the rest of the organization, making it possible to ensure a successful implementation of the change process. One might think of some team meetings or open lunch presentations when the rest of the organization's employees would get the chance to be informed about the new change policy of the management.

Secondly, those employees of Hay Group who are interested on working on or contributing to the implementation of the organizational change process by means of sharing their experiences in some specific aspects should be able to get the chance to form a constant climate change team. This team would become the main driver of change. It is important to include people from various departments and business units into this climate change team. In such a way the change process would be incorporated within various organizational levels.

Another aspect that should be taken into account is the necessity to define some general goals that have to be achieved during the climate change process within Hay Group. Together with the set of general goals, one should set a number of mile stones that will help to create the clarity of

how these goals can be accomplished. Such approach will make the change process more tangible and concrete in time for the people.

Finally, one has to remember that any change process cannot become a success unless every employee of the organization would be willing to participate in it or contribute in one or another way to its further development. In another words, even though the climate change team will play the key role in the climate change process within Hay Group, its efforts will produce much less effort if they will not be supported by the rest of the colleagues and team members. That is why the role of the management is to create a certain work environment for Hay Group's employees that would stimulate their active participation in all of the phases of the climate change process.

Chapter 8: Conclusions and Recommendations

In this chapter the main study results and conclusions will be presented. Furthermore, recommendations for the organizational climate tool's application and limitations of this study will be discussed.

8.1 Conclusions

The goal of this study was to develop an organizational climate measurement tool for a quick scan within an organization. As a result, a validated diagnostic tool was developed. It was based on the results of Patterson's et al (2005) research about the measurement of the organizational climate and the Competing Values Framework theory of Quinn and McGrath (1985). Thus, one criteria of the tool's alignment with the latest notions form the academic literature was fulfilled.

Furthermore, one of the main outcomes of this study was a Climate Dimensions Matrix (see Table 4.4.) It provides a summary of the climate dimensions that can be used for the measurement of organizational climate and incorporated into the tool depending on the specific needs of the company. Thus, the structure of "core" and "elective" dimensions was introduced that provides the end users of the tool with more flexibility of its usage. The Climate Dimensions Matrix also gives an indication whether a particular climate dimension is similar to the currently used dimension within Hay Group from the diagnostic tool for team climate. In such a way, it was possible to track the compliance of the new instrument with currently used diagnostic techniques within Hay Group, what fulfilled the second criteria of the tool's correspondence to the diagnostic practices of Hay Group.

Another important outcome of this study was the detailed set of guidelines of how the new diagnostic tool can be efficiently used and incorporated into the consultants' practices. Chapter 4 presented the whole process of the research design of the tool's development. Furthermore, in the Chapters 6 and 7 a detailed example of the tool's usage and interventions design on the example of Hay Group was described. In Appendix 8 a table of contents of the Technical Manual for the new organizational climate diagnostic tool can be found. This Technical Manual was prepared for the internal usage of Hay Group as a detailed guideline for the consultants who would like to use the new diagnostic tool in their work with the clients.

Thus, simplicity in the tool's usage and the possibility quickly to obtain a graphical presentation on the spider diagram of the organizational climate situation within a certain company using one of the gap analyses (see Chapter 4 for detailed description) can be seen as the strong points of the new diagnostic instrument.

The difficulties which were faced in this study were connected with the effort to provide a comprehensive set of climate dimensions included into the tool's structure. For the consistency in the tool's structure it was important to make sure that every quadrant is equally presented with the same number of climate dimensions. Such structure would help to avoid the perception of some quadrants to be "winner" or the "loser" quadrant among the end users of the measurement tool. Thus, for example, the CVF quadrant that was originally called Internal Process quadrant was given a new label of Operational Excellence quadrant because of its more positive connotation for the end users. Furthermore, it was expanded for two new climate dimensions: Job Security and Routinization. For the end users of the diagnostic tool it is important to realize that there are no better or worse climate dimensions or CVF quadrants and that depending on the type of organization and specifics of work an organization can be successful in its performance and development in each of the four CVF quadrants without exception.

Another difficulty concerns the choice of the right questions for the new climate dimensions which were derived from various literature sources. Sometimes it was very hard to make sure that the questions which are being asked within one climate dimension represent what this particular dimensions is actually aiming to measure and do not repeat themselves in their meaning. The results of the statistical analyses described in detail in Chapter 5 served as a good guideline to avoid the questions to measure the same thing or to be totally unconnected with each other under one construct.

8.2. Discussion of the tool's advantages

The organizational climate measurement tool developed in this study resulted in a validated diagnostic instrument which can be used for assessing organizational climate situation within any organization. The tool has a number of advantages, which allow to:

1. Interpret organizational climate situation within any organization, irrespective of the type of sector where a particular organization is located.
2. Take into account the gap analysis of the current and desired organizational climate, considering the difference in their perception between the managers and employees.
3. Perform more profound analysis of some certain organizational climate dimensions, depending on the specific needs and problems of the company.
4. Perform a quick scan of the organizational climate situation in a relatively short period of time by means of tool's quantitative application as a questionnaire among the employees of the particular organization.
5. Provide a clear gap analysis between CVF quadrants and every particular climate dimension as a basis for the further interventions design and change management within the company.

8.3. Study limitations

Notwithstanding the advantages of usage of organizational climate measurement tool, this study also had a number of limitations that will be discussed in this section.

1). Translation aspect

Originally the items for the organizational climate survey were taken from the academic literature sources in English and then were translated into Dutch for the survey dissemination within Hay Group. The translation of the items might have led to some certain loss in internal consistency of the scales. This potential loss was not investigated in this study. In this study the principle of forward-backward translation was applied, when the items from English were translated into Dutch and from Dutch into English again. Such an approach was aimed at reducing the bias of translation for the survey. Afterwards both of the English variants were compared for the consistency. However, the Cronbach Alpha's found in this study are in most cases lower than the Cronbach Alpha's that Patterson et al (2005) found (see Table 5.1).

2). Small sample size

Another limitation concerns the factor structure. The study had a relatively small sample size. Data from 88 respondents who filled in the survey was used for the factor analysis, where the factor structure of 25 organizational climate dimensions was investigated. The available relatively small sample size made it difficult to perform a well-grounded factor analysis, aimed to reveal 25 factors.

3). Homogeneity of sample size

The study was conducted within one particular organization, which excluded the possibility to compare effectiveness of the tool's usage with other organizational environments outside the consulting domain. Thus, the absence of the opportunity to collect the data from other organizations in different sectors and with a more varied employee sample might have caused some bias in the obtained results.

Furthermore, most of the respondents who filled in the questionnaire have such common features as: high education, work in the HR domain and work experience in the in the consultancy domain. This homogeneity in the respondents' structure might have also been an impediment for obtaining good validated results.

4). Limited time of the study

The availability of quite short time to perform this study time had also an impact on its quality. This study was completed within the period of six months which made it quite impossible to check the results and outcomes of the suggested interventions for changing organizational climate within Hay Group. The limited time also hindered collection of more data from other companies.

8.4. Recommendations for future research

Looking at the structure of the Climate Dimensions Matrix (see Appendix 7), the majority of the used climate dimensions comes from the research of Patterson et al (2005). Despite the fact that a number of new climate dimensions such as Cohesion, Commitment, Routinization etc were derived from another academic studies; the tool's core structure still remains primarily based on one source. Therefore, a good challenge for the further research in this direction would be to adjust the tool's structure, making sure that used climate dimensions are equally spread among each of the CVF quadrants in terms of their number and that climate dimensions from other scientific sources will be incorporated into the tool's structure. It would assure more consistency in the underlying theoretical background of the tool's usage.

Another interesting research direction would be to investigate in more detail the connection between organizational climate construct and its outcomes, such as, for example, Innovation, Motivation, Performance and Job Satisfaction (see Figure 4.1). Incorporation of the outcome items into the climate survey would allow to investigate the individual perceptions of employees about certain climate outcomes. Job Satisfaction, for example, could be incorporated into the diagnostic tool by means of adding such a question: "Overall, employees are satisfied with the job they are doing in this organization" (Bach, 2007).

An alternative approach would be not to add any of the outcome measures into the climate survey, but rather to make a summary of the organization's performance outcomes such as turnover ratio, market share, quality of products and services etc. and to compare them in time before and after the interventions for the improvement of the organizational climate would take place in the organization. It would allow to verify the hypothesis about the connection between organizational climate and organizational performance outcomes.

8.4. Recommendations for the tool's practical usage within Hay Group

It is important to assure the tool's usage within various types of organizations. It would enable to build a certain benchmark database of organizational climate data within different organizations in each of the CVF quadrants. This step will help to refine the tool's structure statistically deleting the items that do not show good reliable statistical scores on one or another construct. On the other hand, a good benchmark data base will allow to draw conclusions about the organizational climate situation in the organizations across different sectors and CVF quadrants.

Furthermore, a big data base with the climate scores and outcomes derived from different organizations over time would assist in answering the question whether a good organizational climate results into high organizational performance outcomes. This finding might be very valuable for the consultants in terms of its added value for the customers of Hay Group.

Finally, based on the obtained statistical analyses results from validation phase of the organizational climate measurement tool and taking into account aforementioned limitations and recommendations for the further research we can conclude that the final outcome of this study succeeded to fulfill most of its criteria and constraints. The main outcome was a good comprehensive design of a quick scan measurement tool of organizational climate. Its flexible structure and attached detailed technical manual provide the end user with the possibility to implement the diagnostic tool in various kinds of organizational setting, being able to choose a set of climate dimensions depending on the specific situation and current organizational needs.

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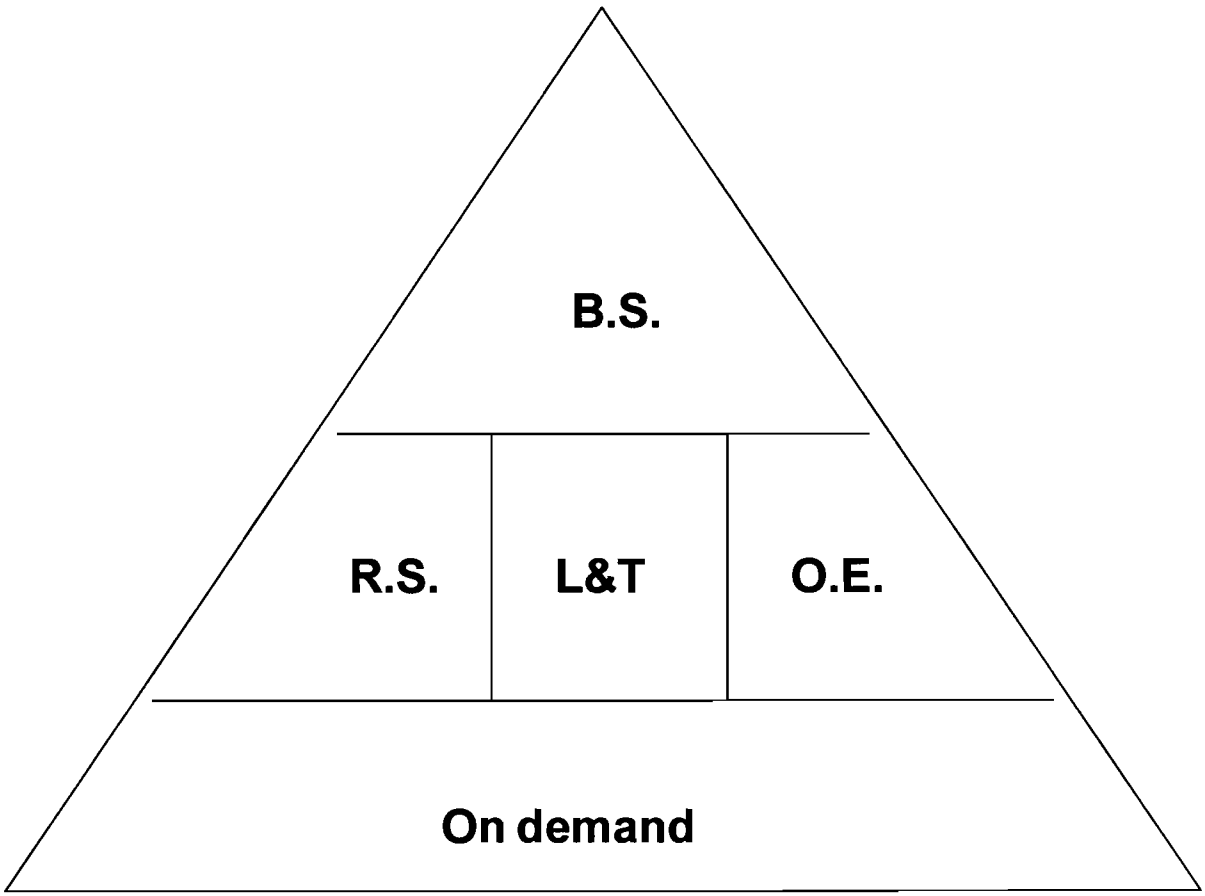
Appendices

Appendix 1. Organizational Chart of Hay Group



Services of Hay Group can be divided into three levels of the pyramid
1. (top) Business Solutions (mission critical projects)
2. (Hr services): Reward Systems, Leadership Talent, Organisational Effectiveness
3. On demand (RIS, Training, E-solutions, Hay & Insight, repeatable, tools driven)

Appendix 2. Scenarios description for the distribution of the "core" and "elective" dimensions

Scenario 1

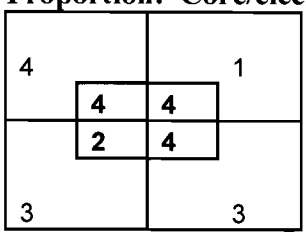
Core dimensions:

Management support	P	Innovation	P
Autonomy	P	Job challenge	others
Involvement	P	Outward focus	P
Cohesion	others	Reflexivity	P
Formalization	P	Organizational clarity	P
Tradition	P	Effort/Contribution	P
		Pressure to work	P
		Efficiency	P

Elective dimensions:

Information sharing/Integration	P	Future orientation	others
Welfare	P		
Commitment	others		
Training	P		
Routinization	Others	Quality	P
Stability	Others	Rewards/Recognition	others
Job security	Others	Performance feedback	P

Proportion: Core/elective



Scenario 1 included four dimensions in each of the quadrants. These dimensions were primarily taken from the OCM instrument of Patterson et al (2005), including also such dimensions as Cohesion and Job Challenge, which were taken from another studies. The reason to put four dimensions in the "core" group of each of the quadrants was the wish to represent as many characteristic features from each of the quadrants as possible. However, it had also a negative effect on the size of the tool, making it quite long and bulky for the respondents to be filled out.

Scenario 2

Core dimensions:

Autonomy	P	Innovation	P
Involvement	P	Job challenge	others
Cohesion	others	Reflexivity	P
Formalization	P	Organizational clarity	P
Tradition	P	Pressure to work	P
		Efficiency	P

Elective dimensions:

Information sharing/Integration	P	Future orientation	others
Welfare	P	Outward focus	
Commitment	others		
Management support	P		
Training	P		
Routinization	Others	Quality	P
Stability	Others	Rewards/Recognition	others
Job security	Others	Performance feedback	P
		Effort/Contribution	

Proportion: Core/elective

5	2
3 **3**	
2 **3**	
3	4

The second scenario presented an alternative way of division of "core" and "elective" dimensions between each of CVF quadrants. It was decided to reduce the number of dimensions in the "core" group from four to three, reducing the number of items which are always asked in the questionnaire. It would make the organizational climate measurement tool more concise in its structure. Most of the "core" dimensions are derived from the Patterson et al (2005) study. However, such dimensions as Cohesion and Job Challenge are also still present in the "core" group.

The main criteria for deleting one dimension from the "core" group of each of the quadrants were based on the similarity of their meaning with the other dimensions in his group. For example, such dimensions Management Support and Cohesion were found to be quite similar in the meaning with each other. That is why only Cohesion was left in the "core" dimensions group, and Management Support was replaced into the "electives" group of the Human Relations Quadrant. Following the similar logic for Innovation and Outward Focus, Outward Focus was replaced into the "electives" group of the Rational Goal Quadrant. In the Rational Goal Quadrant Efficiency was kept in the "core" group, replacing Effort/Contribution dimension into the "electives". Operational Excellence Quadrant did not have any big changes in its structure since there were only two dimensions of Tradition and Formalization and Rules Orientation which were used by the Patterson et al (2005) for this quadrant. That is why, it was decided to keep them in the "core" group for the consistency purposes.

Scenario 3

Core dimensions:

Management support	P	Innovation	P
Autonomy	P	Outward focus	P
Involvement	P	Reflexivity	P
Formalization	P	Organizational clarity	P
Tradition	P	Performance feedback	P
		Efficiency	P

Elective dimensions:

Information sharing/Integration	P	Future orientation	others
Training	P	Job challenge	others
Commitment	others		
Welfare	P		
Cohesion	others		
Routinization	Others	Quality	P
Stability	Others	Rewards/Recognition	others
Job security	Others	Pressure to produce	P
		Effort/Contribution	P

Proportion: Core/elective

5	2
3 **3**	
2 **3**	
3	4

The third scenario was in a way similar with the second one in terms of the number of the "core" dimensions which as kept at the point of three as well. It in this case it was decided, however, to place only the dimensions from the OCM instrument from Patterson et al (2005) in the "core" group for each of the quadrants. Thus, Human Relations Quadrant includes such dimensions as Management Support, Autonomy and Involvement, the Cohesion dimension was moved to the "electives group". Similarly for the Open System Quadrant the Job Challenge dimension was moved to the "elective" group being replaced by Outward Focus. For the Rational Goal Quadrant the climate dimensions Pressure to Work was replaced with Performance Feedback, which was considered to be more applicable to the characteristics of this quadrant. Operational Excellence Quadrant did not have any significant changes and the general number of "core" and "elective dimensions" was left the same.

Each of the aforementioned scenarios was presented and discussed with the consultants of the Hay Group and the supervisors from the TU/e in terms of their consistency and validity for the design of the new tool.

Appendix 3. Summary of the OCAI instrument

Organizational Climate Assessment Instrument (OCAI) enables to assess organizational climate situation within organizational in a quick quantitative way by means of filling in a short questionnaire. After filling in this instrument an overview of the CVF quadrants where a particular organization operates and values that characterize it can be obtained.

The OCAI consists of six questions. Each question has four alternatives. One has to divide 100 points among these four alternatives depending on the extent to which each alternative is similar to the person's organization. A person has to give a higher number of points to the alternative that is most similar to his own organization.

For example, in question 1, if you think that alternative A is very similar to your organization, and alternatives B and C are somewhat similar, and alternative D is hardly similar at all, you might give 55 points to A, 20 points to B and C, and 5 points to D. It is important to be sure that the total will equal 100 for each question.

The instrument has two columns: where one represents the **current situation**: how the things are in the organization now, at this particular moment. Another column gives the presentation of the **desired situation** of how the things should have looked like in future.

After all six questions were filled; all responses for A column should be added and divided by six for computing the average score for A. In the similar manner average scores for B, C and D should be computed. The obtained mean scores correspond to a particular CVF quadrant, where:

A: Human Relations Quadrant,
B: Open System Quadrant,
C: Rational Goal Quadrant,
D: Operational Excellence Quadrant.

Finally, these mean scores can be presented visually on the spider diagram, similarly to Figure 4, described in section V, providing an indication of where a particular organization is located in terms of four CVF.

Appendix 4. CVF Quadrants Description

I. Human Relations Quadrant

Typical characteristics:

- Friendly supportive atmosphere among employees
- High employees' commitment to the organization
- Customers are seen as partners
- Organization is in the business of developing a humane work environment
- Teamwork, employee involvement programs, corporate commitment to employees
- Informality and self-management

The organization focuses on:

- Loyalty and tradition
- Long-term benefit of human resources development
- Cohesion and morale
- Participation, teamwork and consensus
- Internal maintenance with flexibility
- Concern for people
- Sensitivity for customers

Main effectiveness criteria:

- Teamwork & employee development

Success is defined as:

Sensitivity to customers and concern for people

Leader type:

- Facilitator
- Mentor
- Parent

Major management task:

Employee's empowerment and facilitation of their participation, commitment and loyalty

Examples of organizations:

- Japanese, Asian working style
- People Express Airlines (USA)

II. Internal Process Quadrant/Operational Excellence

Typical characteristics:

- Formalized and structured place to work
- Procedures govern what people do
- Secure employment and predictability
- Formal rules and policies hold organization together
- Good coordination of tasks and procedures within organization
- Concern for operational efficiency and stability

The organization focuses on:

- Rules and standard procedures
- Internal maintenance
- Stability and control
- Operational efficiency
- Precision in procedures and their coordination

- Good coordination of processes within organization

Main effectiveness criteria:

Maintaining efficient, reliable, fast, smooth-flowing organizational and production excellence and process optimization.

Success is defined as:

Stability, operational efficiency, smooth development and low cost.

Leader type:

- Coordinator
- Monitor
- Organizer

Major management: task:

- To enable stable organizational performance with efficient smooth operations.
- Secure employment and predictability

Examples of organizations:

- Police
- Tax office
- Governmental institutions
- Large organizations (Philips...?)
- Ford (17 levels of management)
- McDonalds
- Aviation, Air Traffic Control

III. Open System Quadrant

Typical characteristics:

- Dynamic, entrepreneurial and creative place to work
- Employees are not afraid to take a risk and new challenges in their work
- Firm organizational chart, power and division of responsibilities are defined depending on the problem which organization faces at the time

The organization focuses on:

- Behaving on the leading edge
- Growth and acquisition of the new resources
- External positioning with a high degree of flexibility and individuality
- Individuality, risk-taking and anticipation of the future development

Main effectiveness criteria:

- Commitment to experimentation and innovation
- Employees individual initiative and freedom

Success is defined as:

Delivery of new unique innovative products or services for the customers, quick adaptation to new opportunities.

Leader type:

- Innovator
- Risk-taker
- Entrepreneur

Major management task:

Fostering adaptability, flexibility and creativity where uncertainty, ambiguity and/or information-overload are typical.

Examples of organizations:

- Philips
- HI-Tech Manufacturer

IV. Rational Goal Quadrant

Typical characteristics:

- Result-oriented organization whose major concern is with getting job done
- People are competitive and goal-oriented
- Hard and demanding requirements for the job outcome
- Hard-driving competitiveness

The organization focuses on:

- Increasing of profit and winning on the market
- Organizational success and reputation
- Competitive pricing and market leadership
- External positioning with a need for stability and control
- Task accomplishment, productivity and effectiveness

Main effectiveness criteria:

Competitive actions and achievement of measurable goals and targets

Success is defined as:

The amount of the gained market share and penetration

Leader type:

- Hard-driver
- Producer
- Competitor

Major management task:

To drive an organization towards productivity, results and increasing profit, trying to attain the best position among the competitors.

Examples of organizations:

- General Electric
- Shell
- McKinsey
- DAF
- Multinational Manufacturer

Appendix 5. CVF Output Results per CVF Quadrant

Human Relations Quadrant

```
Mplus VERSION 3.11
MUTHEN & MUTHEN
07/09/2008   9:49 AM
INPUT INSTRUCTIONS
  TITLE:        hr QUADR
  DATA:        FILE IS
  'C:\Documents and Settings\Andrii_Dvortsov\
  Desktop\Human relations (Current+Elecetive Core).DAT';
  VARIABLE:        NAMES ARE
A81          A99         A9          A11         A49
   A24         A41          A47        A3          A102
   A89        A40         A124     A103 A112

  MODEL:         Betr BY A81 - A49;
         TRain BY A24 - A102;
         CohInz BY A89 - A112;
  OUTPUT: Stand Mod;
INPUT READING TERMINATED NORMALLY
hr QUADR
SUMMARY OF ANALYSIS
Number of groups                                                 1
Number of observations                                          88
Number of dependent variables                                   15
Number of independent variables                                  0
Number of continuous latent variables                            3
Observed dependent variables
  Continuous
   A81          A99         A9          A11         A49
   A24         A41         A47        A3          A102
   A89        A40         A124     A103 A112
Continuous latent variables
   BETR        TRAIN       COHINZ
Estimator                                                       ML
Information matrix                                        EXPECTED
Maximum number of iterations                                  1000
Convergence criterion                                    0.500D-04
Maximum number of steepest descent iterations                   20
Input data file(s)
  C:\Documents     and     Settings\Andrii_Dvortsov\Desktop\Human     relations
(Current+Ele
Input data format  FREE
THE MODEL ESTIMATION TERMINATED NORMALLY
TESTS OF MODEL FIT
Chi-Square Test of Model Fit
          Value                             104.317
          Degrees of Freedom                    87
          P-Value                           0.040
Chi-Square Test of Model Fit for the Baseline Model
          Value                             322.498
          Degrees of Freedom           105
          P-Value                           0.0000
CFI/TLI
          CFI                               0.920
          TLI                               0.904
```

Loglikelihood

H0 Value	-2116.927
H1 Value	-2064.769

Information Criteria

Number of Free Parameters	33
Akaike (AIC)	4299.854
Bayesian (BIC)	4379.676
Sample-Size Adjusted BIC (n* = (n + 2) / 24)	4275.586

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.075	
90 Percent C.I.	0.000	0.071
Probability RMSEA <= .05	0.000	

SRMR (Standardized Root Mean Square Residual)

Value	0.06

MODEL RESULTS

		Estimates	S.E.	Est./S.E.	Std (t-value)	StdYX (Factor Loading)
BETR	BY					
	A81	0.540	0.170	0.000	0.4	
	A99	0.417	0.185	2.254	0.375	0.480
	A9	1.000	0.000	2.26	0.900	0.740
	A11	0.644	0.180	3.568	0.580	0.461
	A49	0.950	0.191	4.975	0.856	0.775
TRAIN	BY					
	A25	1.000	0.000	0.000	0.475	0.467
	A41	1.489	0.440	3.381	0.707	0.733
	A47	1.080	0.351	3.081	0.513	0.548
	A3	1.582	0.323	3.12	0.553	0.570
	A102	1.684	0.425	3.26	0.658	0.450
COHINZ	BY					
	A89	1.244	4.123	0.00	0.522	0.560
	A40	1.000	0.000	3.00	0.420	0.470
	A124	1.754	5.810	3.30	0.736	0.707
	A103	1.286	4.261	3.26	0.540	0.643
	A112	1.530	5.070	3.02	0.642	0.705
TRAIN	WITH					
	BETR	0.114	0.072	1.587	0.268	0.268
COHINZ	WITH					
	BETR	0.205	0.680	0.301	0.541	0.541
	TRAIN	0.124	0.411	0.300	0.620	0.620
Variances						
	BETR	0.811	0.246	3.288	1.000	1.000
	TRAIN	0.225	0.118	1.917	1.000	1.000
	COHINZ	0.176	1.166	0.151	1.000	1.000
Residual Variances						
	A9	0.669	0.172	3.890	0.669	0.452
	A11	1.248	0.211	5.929	1.248	0.788
	A49	0.520	0.147	3.546	0.520	0.415
	A99	1.599	0.255	6.277	1.599	0.919
	A81	1.191	0.196	6.067	1.191	0.835
	A25	0.807	0.140	5.772	0.807	0.782
	A41	0.430	0.118	3.635	0.430	0.463
	A47	0.613	0.114	5.395	0.613	0.700
	A102	0.807	0.102	6.385	0.807	0.976
	A3	0.870	0.164	5.311	0.870	0.684

```
    A40                0.636     0.320      6.440     0.636     0.999
    A124               0.541     0.114      4.741     0.541     0.500
    A103               0.412     0.079      5.250     0.412     0.586
    A89                0.519     0.093      5.561     0.519     0.656
    A112               0.419     0.088      4.767     0.419     0.504
R-SQUARE
    Observed
    Variable  R-Square
    A9           0.548
    A11          0.212
    A49          0.585
    A99          0.081
    A81          0.165
    A25          0.218
    A41          0.537
    A47          0.300
    A102         0.024
    A3           0.316
    A40          0.001
    A124         0.500
    A103         0.414
    A89          0.344
    A112         0.496

MODEL MODIFICATION INDICES
Minimum M.I. value for printing the modification index    10.000

                             M.I.     E.P.C.  Std E.P.C.  StdYX E.P.C.
WITH Statements
A124     WITH A41          10.304     0.241      0.241        0.240
     Beginning Time:  09:49:28
        Ending Time:  09:49:28
       Elapsed Time:  00:00:00
```

Open System Quadrant

```
Mplus VERSION 3.11
MUTHEN & MUTHEN
07/18/2008   3:13 PM
INPUT INSTRUCTION
  TITLE:        Open System
  DATA:        FILE IS
  'C:\Documents and Settings\Andrii_Dvortsov\
  Desktop\Open system .DAT';
  VARIABLE:        NAMES ARE A100, A75, A24, A20, A6
                   A37, A88, A113, A117
                   A50, A79,  A126
                   A22, A48, A116, A15
                   A4, A32, a39, a111;
             MISSING ARE A100 - A111 (-99);
             USEVARIABLES ARE A4 - A111,  a37 - a117 a100 - a6;
  MODEL:          innov BY A100 - A6;
           ExtGer BY A37 - A117;
         ! Refle BY A50 - A126;
        !FutOr BY A22-A15;
           JobChal BY A4 - A111;
  OUTPUT: Stand Mod;
INPUT READING TERMINATED NORMALLY
```

```
Open System
SUMMARY OF ANALYSIS
Number of groups                                                 1
Number of observations                                          80
Number of dependent variables                                   13
Number of independent variables                                  0
Number of continuous latent variables                            3
Observed dependent variables
  Continuous
   A4          A32         A39         A111        A37         A88
   A113        A117        A100        A75         A24         A20
   A6
Continuous latent variables
   INNOV       EXTGER      JOBCHAL
Estimator                                                       ML
Information matrix                                        EXPECTED
Maximum number of iterations                                  1000
Convergence criterion                                    0.500D-04
Maximum number of steepest descent iterations                   20
Input data file(s)
  C:\Documents and Settings\Andrii_Dvortsov\Desktop\Open system .DAT
Input data format  FREE
THE MODEL ESTIMATION TERMINATED NORMALLY
     WARNING: THE RESIDUAL COVARIANCE MATRIX (PSI) IS NOT POSITIVE DEFINITE.
     PROBLEM INVOLVING VARIABLE EXTGER.
TESTS OF MODEL FIT
Chi-Square Test of Model Fit
          Value                             95.559
          Degrees of Freedom                    62
          P-Value                           0.040
Chi-Square Test of Model Fit for the Baseline Model
          Value                            275.753
          Degrees of Freedom                    78
          P-Value                           0.0000
CFI/TLI
          CFI                                0.91
          TLI                                0.90
Loglikelihood
          H0 Value                       -1492.280
          H1 Value                       -1444.500
Information Criteria
          Number of Free Parameters             29
          Akaike (AIC)                     3042.559
          Bayesian (BIC)                   3111.638
          Sample-Size Adjusted BIC         3020.191
            (n* = (n + 2) / 24)
RMSEA (Root Mean Square Error Of Approximation)
          Estimate                           0.062
          90 Percent C.I.                    0.047  0.114
          Probability RMSEA <= .05           0.063
SRMR (Standardized Root Mean Square Residual)
          Value                              0.086
MODEL RESULTS
                    Estimates     S.E.  Est./S.E.    Std     StdYX
 INNOV    BY
    A100               1.000    0.000      0.000    0.490    0.453
    A75                1.394    0.371      3.760    0.683    0.622
```

```
    A24                1.006     0.315      3.191     0.493     0.461
    A20                1.154     0.332      3.475     0.565     0.533
    A6                 1.067     0.331      3.223     0.522     0.468
 EXTGER   BY
    A37                1.000     0.000      0.000     0.539     0.450
    A113               1.029     0.275      3.744     0.555     0.511
    A117               1.044     0.280      3.726     0.562     0.506
 JOBCHAL  BY
    A4                 1.000     0.000      0.000     0.389     0.47
    A32                2.109     0.787      2.681     0.820     0.72
    A39                1.017     0.491      2.022     0.396     0.53
EXTGER   WITH
    INOV               0.351     0.115      3.037     1.329     1.329
 JOBCHAL  WITH
    INNOV              0.189     0.084      2.240     0.993     0.993
    EXTGER             0.216     0.095      2.272     1.031     1.031
 Variances
    INNOV              0.240     0.116      2.067     1.000     1.000
    EXTGER             0.290     0.142      2.048     1.000     1.000
    JOBCHAL            0.151     0.107      1.411     1.000     1.000
 Residual Variances
    A4                 1.108     0.182      6.078     1.108     0.880
    A32                0.597     0.171      3.499     0.597     0.470
    A39                1.098     0.181      6.067     1.098     0.875
    A111               1.260     0.209      6.041     1.260     0.865
    A37                1.145     0.185      6.196     1.145     0.798
    A88                1.013     0.160      6.352     1.013     0.970
    A113               0.872     0.146      5.992     0.872     0.739
    A117               0.918     0.153      6.010     0.918     0.744
    A100               0.930     0.150      6.199     0.930     0.795
    A75                0.740     0.127      5.802     0.740     0.613
    A24                0.901     0.146      6.190     0.901     0.788
    A20                0.805     0.132      6.078     0.805     0.716
    A6                 0.972     0.157      6.182     0.972     0.781
R-SQUARE
    Observed
    Variable  R-Square
    A4           0.120
    A32          0.530
    A39          0.125
    A111         0.135
    A37          0.202
    A88          0.030
    A113         0.261
    A117         0.256
    A100         0.205
    A75          0.387
    A24          0.212
    A20          0.284
    A6           0.219
MODEL MODIFICATION INDICES
Minimum M.I. value for printing the modification index    10.000
                          M.I.     E.P.C.  Std E.P.C.  StdYX E.P.C.
No modification indices above the minimum value.
     Beginning Time:  15:13:38
        Ending Time:  15:13:38
       Elapsed Time:  00:00:00
```

Operational Excellence

```
Mplus VERSION 3.11
MUTHEN & MUTHEN
07/18/2008   1:36 PM
INPUT INSTRUCTIONS
  TITLE:        hr QUADR
  DATA:        FILE IS
  'C:\Documents and Settings\Andrii_Dvortsov\
  Desktop\OE.DAT';
    VARIABLE:        NAMES ARE
                  a38, a58, A80, A82, A110
                   A77, a52, A31, A27
                   A8, A34, a59, A104, A35
                   A1, A36, a69, A86;
                  MISSING ARE a38 - a86 (-99);
    MODEL:              FormRul BY A38 - a110;
                      TRad BY a77 - a27;
                      Routin BY a8 - a35;
                      Stabil BY a1 - a86;
  OUTPUT: Stand Mod;
INPUT READING TERMINATED NORMALLY
hr QUADR
SUMMARY OF ANALYSIS
Number of groups                                                 1
Number of observations                                          88
Number of dependent variables                                   20
Number of independent variables                                  0
Number of continuous latent variables                            4
Observed dependent variables
  Continuous
   A38         A58         A80         A82
   A110        A77         A52         A31         A27         A8
   A34         A59         A104        A35         A1          A36
   A69         A86

Continuous latent variables
   FORMRUL     TRAD        ROUTIN      STABIL

Estimator                                                       ML
Information matrix                                        EXPECTED
Maximum number of iterations                                  1000
Convergence criterion                                    0.500D-04
Maximum number of steepest descent iterations                   20
Input data file(s)
  C:\Documents and Settings\Andrii_Dvortsov\Desktop\OE.DAT
Input data format  FREE
THE MODEL ESTIMATION TERMINATED NORMALLY
     WARNING: THE RESIDUAL COVARIANCE MATRIX (PSI) IS NOT POSITIVE DEFINITE.
     PROBLEM INVOLVING VARIABLE ROUTIN.
TESTS OF MODEL FIT
Chi-Square Test of Model Fit
          Value                             215.548
          Degrees of Freedom                    164
          P-Value                            0.0043
Chi-Square Test of Model Fit for the Baseline Model
```

Value	468.957	
Degrees of Freedom	190	
P-Value	0.0000	
CFI/TLI		
CFI	0.92	
TLI	0.904	
Loglikelihood		
H0 Value	-3117.106	
1 Value	-3009.332	
Information Criteria		
Number of Free Parameters	46	
Akaike (AIC)	6326.213	
Bayesian (BIC)	6440.170	
Sample-Size Adjusted BIC (n* = (n + 2) / 24)	6295.013	
RSEA (Root Mean Square Error Of Approximation)		
Estimate	0.060	
90 Percent C.I.	0.035	0.081
Probability RMSEA <= .05	0.233	
SRMR (Standardized Root Mean Square Residual)		
Value	0.094	

MODEL RESULTS

	Estimates	S.E.	Est./S.E.	Std	StdYX
FORMRUL BY					
A38	1.000	0.000	0.000	0.572	0.583
A58	1.701	0.325	5.237	0.973	0.770
A80	1.523	0.302	5.036	0.871	0.721
A82	1.275	0.265	4.808	0.729	0.671
A110	1.005	0.246	4.090	0.575	0.536
TRAD BY					
A77	1.000	0.000	0.000	0.269	0.226
A52	5.558	2.418	2.298	1.496	0.372
A27	1.063	0.523	2.333	0.286	0.263
ROUTIN BY					
A8	1.000	0.000	0.000	0.696	0.523
A59	1.096	0.277	3.962	3.763	0.625
A104	0.754	0.245	3.079	0.525	0.425
STABIL BY					
A36	1.000	0.000	0.000	0.024	0.48
A69	1.305	0.772	3.70	0.802	0.69
A86	1.578	0.680	4.50	0.279	0.56
TRAD WITH					
FORMRUL	-0.004	0.038	0.103	0.026	0.026
ROUTIN WITH					
FORMRUL	0.299	0.098	3.058	0.751	0.751
TRAD	0.193	0.094	2.042	1.029	0.59
STABIL WITH					
FORMRUL	0.011	0.074	0.146	0.789	0.789
TRAD	0.006	0.043	0.146	0.976	0.976
ROUTIN	0.009	0.063	0.146	0.550	0.550
Variances					
FORMRUL	0.327	0.117	2.801	1.000	1.000
TRAD	0.072	0.076	0.948	1.000	1.000
ROUTIN	0.484	0.212	2.287	1.000	1.000
STABIL	0.001	0.008	0.073	1.000	1.000
Residual Variances					
A38	0.636	0.105	6.080	0.636	0.660

```
    A58                0.650     0.129      5.040     0.650     0.407
    A80                0.701     0.129      5.455     0.701     0.480
    A82                0.649     0.113      5.747     0.649     0.550
    A68                1.279     0.202      6.320     1.279     0.774
    A96                1.315     0.199      6.603     1.315     0.972
    A110               0.821     0.132      6.201     0.821     0.713
    A77                1.346     0.206      6.533     1.346     0.949
    A52                1.921     2.502      5.563     0.921     0.862
    A31                1.597     0.240      6.641     1.597     0.996
    A27                1.097     0.172      6.394     1.097     0.931
    A8                 1.285     0.221      5.822     1.285     0.726
    A34                1.375     3.826      6.632     0.375     0.999
    A59                0.908     0.181      5.020     0.908     0.610
    A104               1.252     0.202      6.207     1.252     0.820
    A35                1.413     0.069      6.632     0.413     0.999
    A1                 1.936     0.292      6.633     1.936     0.000
    A36                1.004     0.160      6.269     1.004     0.851
    A69                0.686     0.212      3.240     0.686     0.516
    A86                3.389     0.514      6.597     3.389     0.978
R-SQUAR
    Observed
    Variable  R-Square
    A38          0.340
    A58          0.593
    A80          0.520
    A82          0.450
    A68          0.226
    A96          0.028
    A110         0.287
    A77          0.051
    A52          0.138
    A31          0.004
    A27          0.069
    A8           0.274
    A34          0.001
    A59          0.390
    A104         0.180
    A35          0.001
    A1           0.000
    A36          0.149
    A69          0.484
    A86          0.022
MODEL MODIFICATION INDICES
     Beginning Time:  13:36:27
        Ending Time:  13:36:27
       Elapsed Time:  00:00:00
```

Rational Goal Quadrant

```
Mplus VERSION 3.11
MUTHEN & MUTHEN
07/18/2008   3:22 PM
INPUT INSTRUCTIONS
  TITLE:        Rational Goal
  DATA:        FILE IS
  'C:\Documents and Settings\Andrii_Dvortsov\
  Desktop\Rational Goal.DAT';
  VARIABLE:        NAMES ARE
```

```
              A73, A78, A85, A87, A108, A98
              A10, A45, A57, A70, A55
              A18, A21, A33,  A92, A16,
               A13 a91, A93, a5
              a23, A76, a42, a63
                                                A46, A62, A125
                                                 A28  A97, A119;
               MISSING ARE A46 - A119 (-99);
           USEVARIABLES ARE A18 - A127, a13 - a5, a62 - a125;
  MODEL:        ! OrgClar BY A73 - A98;
         !  PerFee BY A10 - A55;
        Effit BY A18 - A127;
       Qual BY A13 - A5;
       !RewRec BY A23 - A63;
        PresProd BY A62 - A125;
       ! EffContr BY A28 - A119;
  OUTPUT: Stand Mod;
INPUT READING TERMINATED NORMALLY
Rational Goal
SUMMARY OF ANALYSIS
Nmber of groups                                                 1
Number of observations                                         82
Number of dependent variables                                  13
Number of independent variables                                 0
Number of continuous latent variables                           3
Observed dependent variables
   A18         A21         A33         A53         A92         A16
   A127        A13         A91         A93         A5          A62
   A125
Continuous latent variables
   EFFIT       QUAL        PRESPROD
Estimator                                                      ML
Information matrix                                       EXPECTED
Maximum number of iterations                                1000
Convergence criterion                                  0.500D-04
Maximum number of steepest descent iterations                 20
Input data file(s)
  C:\Documents and Settings\Andrii_Dvortsov\Desktop\Rational Goal.DAT
Input data format  FREE
THE MODEL ESTIMATION TERMINATED NORMALLY
     WARNING:  THE  RESIDUAL  COVARIANCE  MATRIX  (THETA)  IS  NOT  POSITIVE
DEFINITE.
     PROBLEM INVOLVING VARIABLE A62.
TESTS OF MODEL FIT
Chi-Square Test of Model Fit
          Value                             78.134
          Degrees of Freedom                    62
          P-Value                           0.042
Chi-Square Test of Model Fit for the Baseline Model

          Value                            321.254
          Degrees of Freedom                    78
          P-Value                           0.0000
CFI/TLI
          CFI                               0.934
          TLI                               0.917
Loglikelihood
```

```
          H0 Value                          -1700.583
          H1 Value                          -1661.516
Infrmation Criteria
         Number of Free Parameters                29
          Akaike (AIC)                       3459.167
          Bayesian (BIC)                     3528.962
          Sample-Size Adjusted BIC           3437.497
            (n* = (n + 2) / 24)
RMSEA (Root Mean Square Error Of Approximation)
          Estimate                              0.056
          90 Percent C.I.                       0.000  0.092
          Probability RMSEA <= .05              0.377
SRMR (Standardized Root Mean Square Residual)
          Value                                 0.078
MODEL RESULTS
                    Estimates     S.E.  Est./S.E.    Std     StdYX
 EFFIT    BY
    A18                 1.000    0.000      0.000    0.654    0.600
    A21                 0.921    0.200      4.597    0.602    0.703
    A33                 0.989    0.260      3.809    0.647    0.534
    A92                 1.178    0.319      3.698    0.770    0.514
 QUAL     BY
    A13                 1.000    0.000      0.000    0.761    0.811
    A91                 0.853    0.122      6.999    0.649    0.782
    A93                 0.680    0.111      6.134    0.517    0.687
    A5                  0.580    0.171      3.387    0.441    0.53
 PRESPROD BY
    A62                 1.000    0.000      0.000    3.462    0.6
    A125                0.116    0.737      3.5       0.402   0.4
 QUAL     WITH
    EFFIT               0.423    0.111      3.811    0.850    0.850
 PRESPROD WITH
    EFFIT              -0.056    0.110     -0.510   -0.025   -0.025
    QUAL                0.074    0.121      0.613    0.028    0.028
 Variances
    EFFIT               0.427    0.159      2.684    1.000    1.000
    QUAL                0.579    0.141      4.118    1.000    1.000
    PRESPROD           11.987   75.823      0.158    1.000    1.000
 Residual Variances
    A18                 0.758    0.138      5.484    0.758    0.640
    A21                 0.370    0.078      4.762    0.370    0.505
    A33                 1.048    0.182      5.760    1.048    0.715
    A53                 1.099    0.933      6.291    0.099    0.934
    A92                 1.652    0.284      5.826    1.652    0.736
    A16                 1.418    0.225      6.299    1.418    0.938
    A127                1.675    0.266      6.291    1.675    0.934
    A13                 0.300    0.073      4.125    0.300    0.342
    A91                 0.267    0.059      4.532    0.267    0.388
    A93                 0.300    0.056      5.369    0.300    0.528
    A5                  1.047    0.169      6.194    1.047    0.843
    A62                 1.683    0.852      0.128    0.683    0.204
    A125                1.796    1.061      1.693    1.796    0.917
R-SQUARE
    Observed
    Variable  R-Square
    A18          0.360
    A21          0.495
```

```
    A33           0.285
    A53           0.066
    A92           0.264
    A16           0.062
    A127          0.066
    A13           0.658
    A91           0.612
    A93           0.472
    A5            0.157
    A62       Undefined   0.52037E+01
    A125          0.083
MODEL MODIFICATION INDICES
Minimum M.I. value for printing the modification index    10.000

                            M.I.     E.P.C.  Std E.P.C.  StdYX E.P.C.
ON/BY Statements
EFFIT    ON PRESPROD /
PRESPROD BY EFFIT         999.000     0.000      0.000        0.000
     Beginning Time:  15:22:42
        Ending Time:  15:22:42
       Elapsed Time:  00:00:00
```

Appendix 6. Summary of interventions for organizational climate change within every CVF (after Cameron & Quinn, 1999)

Human Relations Quadrant

1. Establish a 360-degree evaluation system. The purpose of such system is to assess leadership practices of the senior management. Input information for it should be obtained from subordinates, peers and superiors. It is important that every senior manager including CEO is assisted in analyzing the data on the feedback information and planning for his further improvement.

2. Design career development program. It should emphasize the inter unit mobility within the organization and will foster cross-functional communication and knowledge sharing between departments and organization as a whole.

3. Institute an effective employee survey program. Such a program will allow to systematically monitor employee attitudes and ideas for the future possible changes. It is important to establish the employees' teams which would work on implementation of changes identified in the survey.

4. Implement conflict management techniques. They will assist in identifying the most long-standing inter group conflicts. It is necessary to perform the analysis of those conflicts and systematic design of interventions to manage them.

5. Examine the expectation systems which drive the managers' behaviors. In this case it is important to change the incentives of those behaviors so that the managers would behave in a more empowered and innovative way.

6. Develop a training program for the managers allowing them to better understand the strategic pressures on the organization and making clearer how their role must change for the organization to become more effective. Assessment of the training needs in each unit is essential for prioritizing the needs and developing specific training program to meet those needs. Each unit in this case should have some people responsible for the organization of the training. Another issue which might be useful for increasing attendance in training programs is to require supervisors of all participants who do not attend the program to report in writing the reason of their absence.

7. Build a cross-functional teamwork by holding a daily 15-minute meeting of all managers. The agenda is to identify all items requiring better coordination between units. Establishing an operational planning group is another way to build cross-functional teamwork. This group would be responsible for providing an overview plan of the possible activities for the next weeks which would foster the development of the cross-functional teamwork. Another initiative might be taken from the side of the senior management for holding a monthly meeting with the participants of the cross-functional teams from different organizational levels, identifying possible bottlenecks in the existing cross-functional cooperation.

8. *Improve relationships between support and line operations.* In case of existing problems use a facilitator to help each support group to identify its strengths and weaknesses in providing support. Help the line groups to identify their key support needs. Hold sessions where the groups explore their relationship and develop a new set of expectations for how to work together.

Operational Excellence Quadrant

1. Improvement of service delivery time. In this case it might be useful to conduct a detailed examination of the time it takes between customer requests for services and products and their actual delivery. Making of a detailed process chart will help to identify the bottleneck points where the delivery time can be reduced by means of more efficient work organization.

2. *Making/putting current organizational work practices and procedures in compliance with the organizational mission and vision.* This can be achieved by monthly and annual audit of existing work performance and measurement systems. It will make possible to check whether these systems are focused on the desired future organization's mission and vision rather than on present less efficient work practices and procedures.
3. *Conduct (work) process and practice evaluation in each organizational work unit.* Establishing measurement criteria and methods for maintaining accountability will facilitate this process.
4. Consider the concept of rightsizing the organization. It implies not only in reduction of the number of people working in a particular department, but also in aiming to increase the amount of workforce in those organizational units where it is needed to assuring their effective functioning.
5. Establish the "workout" program. Although the workforce is often reduced, the amount of work often stays the same or even increases. Take work out of the existing system.
6. Implement various optimization practices within organization. It can concern increasing the capacity for information flow through the system, particularly in times of high tension or crisis. Furthermore, one should examine the possibilities for establishing more efficient inventory control policies by instituting "just in time" practices.
7. Implement a health and safety audit. Develop a system to assess and improve health and safety, and hold an annual audit that closely examines all such practices.
8. Improve information exchange and knowledge sharing practices within organization.
It can be achieved by putting some project manager in charge of building a common system that will allow to all departments to access all information from them. Furthermore, latest technology means and services might be introduced to improve the efficiency of information exchange between the departments. Finally an analysis of the physical location of all organizational units might be conducted revealing the opportunities to rearrange their location in a more effective and efficient way which will facilitate better coordination and information exchange between various organizational units.
9. Perform the complete inventory of the organizational equipment assets. This process might be done every three or five years and it is aimed to improve the existing rules and procedures within organization and single departments by means of introduction of the latest technological breakthroughs.

Rational Goal Quadrant

1. Review the current vision and mission used in the organization at the corporate level. It is important to translate both mission and vision from the organizational level to the level of every work unit, making them in that way more meaningful for the organization.
2. *Reexamine all organizational processes associated with customer contacts and information flow from the customer through the organization.* It is important always to take into consideration the needs of special segments of the organization's customers and try to find the new ways to respond to them.
3. Constantly analyze the market evolution and change. It is of crucial importance to keep a close look on all new notions and changes on the market in terms of the customers, competitors and price policy. It will allow the organization to be able to quickly adjust to the new changes without any negative impact on the organizational functioning. A thorough study of the best

quality achievements of the competitors and discussing those issues with employees will help to develop new strategies and approaches for this problem.

4. Establish a performance improvement program. It should allow every employee to bring up new suggestions and ideas how to improve profitability, productivity, quality and responsiveness. The main findings should be openly discussed with organization's higher management to assure direct information flow and quick implementation of the new concepts.

5. Constantly improve on your customer relations. One suggestion might be to employ an outside marketing firm to survey customer satisfaction. Another important task would be to assess the levels of courtesy, competence and concern that organization's employees' show towards the customers. The organization might consider implementing the concept of customer alliances as a new way to strengthen the relationship with the largest customers. It would allow the customers to be involved and provide input into the organization's decision-making process, making them to feel more affiliated with the organization. Finally, one could conduct regular interviews with constant customers in order to obtain their current expectations and levels of satisfaction with services and products.

6. *Competency assessment.* Assess your organization's competences and assess them against anticipated future demands. Develop a program of competency acquisition and talent development.

7. Benchmarking. Conducting a good benchmarking practice could help in the change efforts to create more productive environment for rational goal quadrant. In this way employees of the organization will be always kept updated about the latest best business practices from the organizations.

8. Performance evaluation. Improve the standards and current practices of performance evaluation. It is important to have an overview of the overall organizational performance and performance of each business unit as the basis for the further interventions and improvements.

Open System Quadrant

1. Encourage more focus on managing the future. Perform an analysis of organizational key values in terms of emphasis on adhocracy values. Furthermore, it might be necessary to review the current organizational vision statement in terms of its affiliation with future and innovation notions.

2. Implement new planning policy. It might involve employment of a planning process that operates on a five-year time horizon and involves both short and long-term planning.

3. Encourage innovation. This task could be accomplished in various ways. One of the possible scenarios would be to ask line-managers to conceptualize and write down their ideas and new strategies for the further organizational development. Another approach would be to conduct regular brainstorming meetings with managers from various departments about the best unconventional ways of proceeding with the current business strategy development. It is very important to develop systems which would encourage, measure and reward innovative behavior at all organizational levels.

4. Improve organizational learning. Assign one person that would be responsible for the development of the concept of organizational learning within the organization. Each organizational unit has to be taken into consideration. It will help to obtain a general overview of the current learning practices and to asses the capacities of the organization to learn more effectively in future and being able to share the acquired knowledge with each other.

5. *Training program for employees.* Organize a special training program for the employees that includes practical implications of creative thinking, the strategic organizational development and the basic principles of organizational innovation.
6. *Recognize creativity.* Develop visible rewards that recognize creativity and innovation of employees, teams and business units. It is important to recognize not only good ideas but also promote different kinds of activities that would help the new ideas to get developed and adopted.
7. *Explore the use of new technology* to create new alternatives for more efficient work organization and organizational functioning.

Appendix 7: Climate Dimensions Matrix

N	Climate Dimension	CVF Quadrant	Possible questions	Mentioned in the article
1	Autonomy	Human Relations	Managers let people make their own decisions much of the time	Patterson et al (2005) James & James (1989)
2	Integration/ Information sharing	Human Relations	Collaboration between departments is very effective	Patterson et al (2005) James & James (1989)
3	Involvement/ Participative Safety	Human Relations	Management involve people when decisions are made that affect them	Patterson et al (2005) Andreson et al (1998) Brown (1996) Payne et al (1971)
4	Supervisory Support	Human Relations	Supervisors can be relied upon to give good guidance to people	Patterson et al (2005)
5	Training/ Self-expression	Human Relations	People are strongly encouraged to develop their new skills - Training was offered in the right moment corresponding to the current needs of the employees	Patterson et al (2005) Brown (1996) Payne et al (1971) Moxnes & Eilertsen (1991)
6	Welfare/ Management Support	Human Relations	This company cares about its employees	Patterson et al (2005) Brown (1996) James & James (1989) Moxnes & Eilertsen (1991)
7	Formalization/ Rules Orientation	Internal Process	It is considered very important here to follow the rules	Patterson et al (2005) Payne et al (1971)
8	Tradition	Internal Process	Changes in the way things are done here happen very slowly	Patterson et al (2005)
9	Innovation & Flexibility	Open Systems	- The company is quick to develop and implement new ideas; - New ideas are always being tried out here	Patterson et al (2005) Andreson et al (1998) Payne et al (1971)
10	Outward focus	Open Systems	The company is constantly looking for new opportunities on the market;	Patterson et al (2005)
11	Reflexivity	Open Systems	Methods used to get the job done are often discussed and improved	Patterson et al (2005)
12	Organizational Clarity/ Vision	Rational Goal	People are clear about the aims and the vision of the company	Patterson et al(2005), Andreson et al (1998) Brown (1996)
13	Efficiency	Rational Goal	Productivity could be improved if jobs were planned and organized better	Patterson et al (2005) Payne et al (1971)
14	Effort/Contribution	Rational Goal	People always want to perform the best of their ability	Patterson et al (2005) Brown (1996)

				James & James (1989) Payne et al (1971)
15	Performance Feedback	Rational Goal	People always receive feedback on the quality of the job they have done	Patterson et al (2005) James & James (1989)
16	Pressure to produce/ Work Intensity	Rational Goal	-Management require people to work extremely hard -Employees have very high number of tasks to perform during the day	Patterson et al (2005) Brown (1996) Payne et al (1971) James & James (1989)
17	Quality/ Task Orientation	Rational Goal	-Company is always trying to achieve the highest standards of its quality; -people here follow the maxim "business before pleasure"	Patterson et al (2005) Andreson et al (1998) Payne et al (1971)
18	Rewards/Recognition	Rational Goal	Employees receive rewards and recognition for successfully performed tasks	Brown (1996)
19	Time Commitment	Human Relations	People remain committed to the organization over a certain period of time	Brown (1996)
20	Esprit	Human Relations	Moral dimension, employees perceive that they achieve a significant degree of task accomplishment	Lyon et al (1986)
21	Intimacy	Human Relations	Employees feel themselves socially affiliated wit the company and with their colleagues	Lyon et al (1986) James & James (1989)
22	Aloofness	Internal Process	Management behavior is characterized as very formal and impersonal, describing emotional distance between manager and his subordinates	Lyon et al (1986) Payne et al (1971)
23	Trust	Human Relations	There is an atmosphere of trust and mutual understanding between managers and their employees	Lyon et al (1986) Payne et al (1971) James & James (1989) Patterson et al (2005)
24	Job Challenge	Open Systems	- Employees are provided with new challengeable tasks to perform; - Most of activities present a real personal challenge	Brown (1996) Payne et al (1971) James & James (1989)
25	Egalitarism	Human Relations	There are no favorites in this place – everyone gets treated alike	Payne et al (1971)
26	Open-mindedness	Open Systems	People here speak out openly;	Payne et al (1971)
27	Emotional control	Human Relations	People tend to hide their deeper feelings from each other	Payne et al (1971)
28	Physical caution	Internal Process	Everyone is safety conscious, anxious to avoid accidents and	Payne et al (1971)

			put right the conditions which produce them	
29	Future orientation	Open Systems	- The ability to plan ahead is highly valued here - People here are encouraged to take long-term view	Payne et al (1971)
30	Sociability	Human Relations	- There is a lot of group spirit - Social events get a lot of enthusiasm and support	Payne et al (1971) James & James (1989)
31	Homogeneity	Open Systems	There are many differences in nationality, religion and social status here	Payne et al (1971)
32	Conventionality	Internal Process	-There is a general idea of appropriate dress which everyone follows; -People are always carefully dresses and neatly groomed	Payne et al (1971)

Appendix 8: *Table of Contents of Technical Manual for the Usage of Organizational Climate Measurement Tool within Hay Group*

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