ABSTRACT. Background: Literature studies and analysis of the situation in business practice indicate the organizational culture as an important determinant that can inhibit or assist in the implementation of adaptive, proactive and proinnovation changes. New situations appearing in the external and internal environment as well as new conditions created by technical and technological progress oblige enterprises to adapt or even anticipate changes. Readiness for modification occurs when employees are not satisfied with the existing organizational culture and they prefer a different one. The diagnosis of the discrepancy between the existing and expected organizational culture allows us to assess the willingness to change the situation in the enterprise. This article presents a case study focused on identifying the actual and desired organizational culture in order to diagnose the crew's readiness for changes in the company and possibility an application of design thinking as a as a way to implement innovative solutions.

Methods: The study was conducted in was used OCAI questionnaire, whose authors are: K.S. Cameron and R.E. Quinn. While using the questionnaire, the current and desired state of the organizational culture of the analysed enterprise has been determined. Based on literature studies, the possibilities of using design thinking in the process of changing the organizational culture were verified.

Results and Conclusions: The research results reveal dissonance between the existing and desired state and enable the assessment of the willingness and readiness of the company's staff to change and the possibility of using design thinking. The aim of study was to identify a research gap a diagnosis organisational culture as a factor in change and a possibility of using design thinking in process change. Organizational culture in the course of changes in an enterprise has a decisive impact on employees' abilities and inclinations to develop and implement new ideas.

Key words: organizational culture, changes in organization, design thinking, competing values model, innovations.

INTRODUCTION

Organizational culture is a phenomenon (state of things and managing processes in the enterprise), which is made up of the activities of the members of the organization. Includes the system of values and any standards of behavior people forming. Manifests its self in the manager's proceed and thinking, created developed and adopted by a team of people. Can help or hinder in the implementation of the formal objectives of the Organization [Wyrwicka, 2014]. Culture have a to maintain the unity of the Organization through the creation of a suitable atmosphere of cooperation and through the acceptance of the common objectives.

At the present time in the continuing changes in the external and internal environment and the rapid progress of the technical and technological the companies have to a deal with adaptation to constant changes. The follow on the news and the ability to predict the future is currently it is a big challenge for companies that want to survive and succeed. According to Lorsch and McTague (2016) it should a take a look at culture as a the effect of the changes, and not
a the cause trouble or remedy, because the culture is not something that can "be repaired" and should not be viewed as a target area of transformation. Modification of the organizational culture is the key to the successful implementation of any programs designed to bring of efficiency, as well as a prerequisite for adaptation to an increasingly variable environment in which companies operate [Cameron and Quinn, 2006]. It is significant that some of the most important figures of the organizational culture reform movement - individuals such as Peter, Drucker and Senge - have recognized the importance of design as a key element of cultural change. For example, Peter Drucker’s seminal work, Innovation and Entrepreneurship [Buchanan, 2015].

This article presents a case study focused on the identification of organizational culture, showing that her knowledge is an essential prerequisite for the changes of the company and authors analyzed possibility use design thinking as a supports in process change. Striving to achieve the company purpose usually is associated with the implementation of the changes and their acceptance by the crew. Later in this article shows: basic definitions, concepts and research tool and findings were presented and described research’s conclusions for the analyzed production company.

CHANGES IN THE ORGANIZATION

With the opinion of Peter Drucker, we live in the period of deep transformations, but the change probably more radical than the ones which initiated the second Industrial Revolution of the half of the 19th century or the transformations caused by the Great Depression and the outbreak of the World War II [Jaśniska, 2015]. Harry I. Ansoff notes that "ambient turbulence has increased, which have four trends: the growth of the modern changes, and the increase in the intensity of the ambient place the increase in the rate of change, the increase in the complexity in place" [Ansoff, 2013]. Change can be planned or not, it can be done systematically or spontaneously [Flamholtz and Randle, 2018]. The dynamics of changes in many dimensions (economic, political, social, environmental, technological) that organizations today have to face is unprecedented [Magruk, 2018]. In a rapidly changing environment, a big threat is the lack of management skills and the anticipation of uncertain changes that are often treated as accidental phenomena [Wilson, 2013].

The change in the organization focuses primarily on the social aspect of, above all, the orientation on man as the main object of interest. Every organization, thanks to its human potential, is able to assimilate changes and organize its activities to improve oneself [Jasińska, 2015]. Introducing changes to the organization means not only the implementation of new technologies, procedures, structures and logistic modifications. This is primarily an effect on the people who create the organization, on their beliefs, attitudes, behaviors and values. The result of the experience resulting from the internal interaction of the organization's members is its organizational culture. Any changes in the companies should be based on the knowledge of the existing culture, because thanks to this you can choose appropriate tools to modify people's behavior in the organization and thus support the implementation of changes in innovation. Among these soft areas of management, leading organizational culture takes place. Due to the fact that one increasingly hears about this issue, and on the other hand, a lot of people still do not see this area or do not realize the importance of the process of change. The changes are usually in terms of two extremes - as revolutionary or evolutionary [Alvesson and Sveningsson, 2016]. Identification of the organizational culture is a very important element in the process of change in enterprises. Changing organizational culture entails the transformation of values, beliefs and myths characteristic of the organization. It is a difficult and lengthy process.

Deserti and Rizzo see a great opportunities for the expansion of knowledge about how design practice and organizational change can be carried out simultaneously. Intriguing opportunities are arising to discuss from a new perspective the relationship between design culture as one of the relevant domains of competence and knowledge that addresses
innovation and the phenomenon of organizational change [Deserti and Rizzo, 2013].

In the further part of the study, the authors attempted to define such concepts as organizational culture and design thinking.

**ORGANIZATIONAL CULTURE – DEFINITION**

The term "culture" is one of the most ambiguous and variously defined concepts of what can be found in the literature. It is difficult to cite a single, common and recognized definition of organizational culture. According to Schein, an organization’s culture is influenced by historic events, religion, and group decisions, contributing to a type of organizational identity. Further, Schein offered a helpful distinction between:

1. the visible organizational structures and processes;
2. the strategies, goals, and philosophies or espoused justifications of the organization;
3. the unconscious or taken-for-granted beliefs, perceptions, thoughts, and feelings that ultimately shape the values and actions of an organization [Schein, 2010].

Hofstede and Hofstede (2005) say organization culture is the shared mental software of the people in an organization and though it is treated as a soft concept, it is known to have hard, tangible consequences on performance of organizations [Chatterjee and Pereira and Bates, 2018].

Organizational cultures are often understood as somewhat unique to a given organization, having been developed over time as members solve problems and act on priorities [Schneider and Barbera, 2014].

Among the many ways of understanding the organizational culture of the most useful for the discussion of organizational culture are the shots that emphasize the subordination of the standards as a feature of cultural behavior. They focus on human behavior and not the objects are the result of these behaviors, and stress integrates the functions of culture and cultural phenomena treat only the behavior that has become a social habit, which is characterized by regularity for the appropriate number of members of a particular group [Nogalski, 1998].

Many values derive from the personality and beliefs of the founder and influential members of an organization and are in a sense beyond the control of the organization. Organizational cultural, ethics, norms and values (beliefs and the rules) establish the appropriate way for organizational members to deal with one another and wish all other members of the organization's environments (both internal and external) [Cruz-Cunha and Moriera and Varajao, 2014].

Culture is also commonly observed and reported as practises an entities such as family, school, works organizations, economic and legal systems, political institution and the like [Chhokar and Brodbeck and House, 2008].

The essence of organizational culture can best be explained by comparing it with the manners of a man [Chuda and Wyrwicka, 2013]. Organizational culture manifested in shared values and beliefs, the assumptions, language and symbols, as well as methods of procedure used by members of the organization.

Since it is not possible to focus simultaneously on all aspects of the organization, the correct diagnosis of culture requires strict selection of certain specified dimensions, which will be examined. It is worth mentioning two kinds of dimensions of culture: its content and patterns. Content is everything included in the scenarios that are to help participants recognize the cultural values of their organization. These patterns are profiles of culture, which are obtained by a summary of the results obtained through questionnaires to assess culture. Profiles can be used to make a diagnosis of culture [Cameron and Quinn, 2006].

E. Schein points out that one of the functions of management is the skillful use of culture to development activities [Zbiegień-Maciąg, 2013].
Each organization should establish and improve their organizational culture. The success of the organization decides harmony between organizational culture and its strategy, especially in the change process.

Diagnosis of organizational culture, associated with assigning it to a specific type is particularly useful when changes are planned because the management and staff have different ideas about the needs and directions of transformations.

The later in the article presents case study concerns a production plant operating in Wielkopolska.

DESIGN THINKING

Tim Brown defines design thinking, saying it is “the discipline that benefits common sense and designer methods to meet the needs of people using what is technologically possible and what a reasonable business strategy can change in value for the client, and chance market” (2008).

According to Brown (2009), the design thinking process consists of three main phases:
1. Inspiration (identifying a problem or opportunity that motivates you to search for solutions);
2. Ideation (the process of generating, developing and testing ideas);
3. Implementation (implementation of the solution on the market).

Top management support for quality excellence acts through people, whether they are internal employees (employee relations) or external customers (customer relationship management). Well-operating processes and advanced technologies are not enough to be ready for the change due to new quality initiatives. To build and sustain a culture of quality excellence, people have to be a major part of the solution. This finding is in accordance with the previous change readiness research that link employee behaviors and commitment to organizational change [Uluskan and McCreery and Rothenberg, 2018].

Practices associated with design thinking can help address the demands placed on those undertaking organizational change. Design thinking is an iterative, exploratory process involving visualization, experimentation, the creation and prototyping of models, and gathering feedback [Glen and Suciu and Baughn, 2014].

Design thinking is human-centered. It couples ethnographic methods to develop an understanding of the needs and problems experienced by users, and visual methods represent and share insights. Rapid learning is facilitated through this process, as insights are rapidly translated into tangible outcomes for testing and feedback. While design thinking has generally addressed product and service innovation, a design approach to organizational change would build on these same practices—but with innovation of the organization itself as a key target [Suciu and Baughn, 2016].

Recognizing organizations as collections of human beings who are motivated by varying perspectives and emotions, design thinking emphasizes engagement, dialogue, and learning. By involving customers and other stakeholders in the definition of the problem and the development of solutions, design thinking garners a broad commitment to change. And by supplying a structure to the innovation process, design thinking helps innovators collaborate and agree on what is essential to the outcome at every phase. It does this not only by overcoming workplace politics but by shaping the experiences of the innovators, and of their key stakeholders and implementers, at every step. That is social technology at work [Liedtka, 2018].

Practices associated with design thinking can help address the demands placed on those undertaking organizational change. Design thinking is an iterative, exploratory process involving visualization, experimentation, the creation and prototyping of models, and gathering feedback [Glen and Suciu and Baughn, 2014].

The focus on the project management and project manager’s competencies must fall within the core interest of company managers. This means that management of projects
implies constantly risks monitoring, resources optimization, taking care of contractual relations [Gablas and Ruzicky and Ondrouchova, 2018]. Design thinking is a way to creative, innovative and creative problem solving. It is a people-oriented, prototype based innovation process. The roots of design thinking date back to the 1960s, when it was mainly used in the design of products and services. Currently, its role becomes much more universal. The design thinking pattern is built on three key pillars [Karwowska, 2019]:

1. the attitude on for the on needs of the recipient,
2. approach to the problem from different points of view, involvement in the project of a team of people with diverse competences, experiences and views,
3. testing or checking whether the solution will work in the real world – asking for not clients, recipients, probing, doing surveys.

The design thinking process is divided into 5 stages: empathy, defining the problem, creating ideas, building a prototype, testing [Karwowska, 2019].

According Starostka (2015) empathic understanding user's point of view, quick solution check or interdisciplinary, holistic a look at innovation - these are some of the most important, much wider the context of benefits from which the change in the organizational culture seems to be the most interesting [Starostka, 2015].

A MODEL OF COMPETING VALUES/ COMPETING VALUES FRAMEWORK

A model of competing values arose as a result of research on main features of effective organization. It has been developed based on the main assumptions regarding organization and management, it’s also describes precisely other important aspects as: organizational leadership, organizational effectiveness, management rules and quality management [Cameron and Quinn, 2006].

Culture is characterized by this model on the two axes containing opposite dimensions: one dimension presents at one end of the scale: efficiency criteria with in indication of flexibility, independence and dynamism. On the other side criteria that emphasise immutability, order, stability and control. This means that some organizations consider themselves to be effective when they change, adapt and their degree of formalization is minimal, while others consider it to be efficient when organization is stable, predictable and with an unchanging structure. The second dimension collates efficiency criteria that focus on: orientation on internal affairs, integration and unity with criteria related to the orientation...
on the position in the environment, differentiation and competition on the other side. This means that some organizations are considered to be effective when they form a harmonious whole and the other organizations stands for efficiency as a result of being focused on cooperation or competition with others. The obtained two dimensions – axes - divide the plane into four quadrants, each of which describes separate indicators regarding the organization’s effectiveness.

Described axes divide the plane into four quadrants, corresponding to various – often opposite – phenomena; hence the name: „competing values framework”. Each quadrant represents the views, assumptions and dimensions that make up the organizational culture. Individual quarter have been assigned names that reflect the most characteristic features of the organization [Wyrwicka, 2014].

According to the typology of K.S. Cmaeron and R. E. Quinn we can distinguish four main types of cultures: the clan’s culture, the culture of adhocracy, hierarchy culture and market culture. The figure 1 below presents the characteristics of particular types of cultures.

K.S. Cameron and R. E. Quinn believe that organizational culture is an essential factor affecting the efficiency of any organization. In their theoretical model of competing values that characterize the cultures of an organization they indicate that it significantly affects performance and can obtain competitive information and benefits [Miroshnik, 2013].

According to K.S. Cameron and R.E. Quinn all kinds of efforts related to improving efficiency in organizations based on the use of various tools and techniques and implementing change strategies are wasted if the organizational culture – the system of values, way of thinking, management style – remain unchanged. Modification of the organizational culture is the key to the successful implementation of all programs aimed at increasing efficiency, as well as the condition for adapting to the increasingly volatile environment, in which enterprises operate [Cameron and Quinn, 2006].

Organizational Culture Assessment Instrument is necessary to diagnose organizational culture (the abbreviated name OCAI is used hereinafter).

ORGANIZATIONAL CULTURE ASSESSMENT INSTRUMENT (OCAI)

The diagnosis of organizational culture in a selected company was made using OCAI questionnaire, which allows determining the dominant orientation in a particular organization based on these main types of cultures. It also helps in assessing the strong points of the organization [Cameron and Quinn, 2006]. The questionnaire focuses on six elements and makes it possible to determine what the current state of culture is and what is the desired state. Questionnaire consists of six questions such as:
1. What are the general characteristics of the organization?
2. What is the style of leadership in the organization?
3. What is the style of employee management?
4. What ensures the cohesion of the organization?
5. What is the main emphasis focused on?
6. What are the criteria for success in the organization?

For each of the above questions are given four responses, between which 100 points is divided depends on the extent to which answer situation of the company reflects the most. The highest number of points assigned to the answer means its suits best for the current conditions in the company. The questionnaire comes in two versions, each of them contains the same questions and answers. The difference between these versions is that one of them examines the ‘present state’ of culture, and the other one ‘the desired state’.

DIAGNOSIS OF THE ORGANIZATIONAL CULTURE OF A SMALL ENTERPRISE

The object of the analysis was the manufacturing plant, specialized in production industrial machines, located in Greater Poland. The analyzed company directs its activities to
the needs of clients. Considering the fact that the company produces specialized machines the product must meet all customer expectations. By definition, the client is the last user of the good produced by the enterprise [Wyrwicka, 2014]. In the enterprise in question, the quality of the offered products is very important and treated with priority. The company tried to modify and adapt manufactured machines to the customer’s needs, if possible.

The company was founded in 2013, the legal form of the company is Sp. z o.o. The subject of the study has no formal organizational structure. Currently the company employs fifteen people, although company is in the growth phase and there is a prospect of increasing employment in a short period of time. The average age of employees is 33. The person managing the plant is also the main engineer and machine designer for the plant. Therefore, in this situation, everything must be properly planned and organized, which means that the production process should be well ordered and widely recognized production management is needed [Scott and Cummings, 1983]. It is important because in the context of production each order is a virtually separate project that requires planning and organizing newer processes which should result in a product of the highest quality.

The study involved nine people, including three women and six men, which is 60% of the crew. Among the participants, three people have managerial functions (including the director of the plant).

Mapped out research results based on the OCAI questionnaire are presents graphically in the forms of graphs (coordinate systems in Fig. 2) and present the current state of culture inside the analyzed company. Drawing up the charts is an important stage during the initiation of changed in the company. Presenting it in the form of a graph is more useful for diagnostic purposes than tables. Applying data on the current and desired state to the same graph allowed to find differences between what is and what should be. This course of action also makes it possible to determine how and where changes should be made to the company.

All analyzed features in the present and desired state were presented using the figure 2.

It can be concluded that the dominant type of organizational culture in the present profile is the clan while the clan and adhocracy are desirable. Only in the case of the characteristic of the coherence of the organization in the desired state we can find culture of the hierarchy.

Analyzing individual features, it can be noticed that the clan culture profile is dominant both in the present and desired state.

Discrepancies in the profiles of organizational features appear in the style of leadership, management style and the cohesion of the organization. In the case of leadership and management, the change indicates adhocracy. This may mean that one should think about the future and increase the emphasis on innovation and encourage employees to look for creative solutions. Flexibility and the ability to adapt to change will also be important. In the culture of adhocracy, the dominant values that are important performance indicators are: innovative ideas, innovative solutions and creativity.

The style of employee management in the diagnosed enterprise both in the present and desired state indicates the culture of the clan. The plant manager supports his employees, motivates them to actively participate and act. Another analyzed feature of the organizational culture in which there are discrepancies is: what ensures the cohesion of the organization. In this case, the most important is loyalty, mutual trust and commitment. The profile of the desired culture indicates a slight change towards the hierarchy which is related to the improvement of elements related to the organization of work. This would have a significant impact on improving the company’s operations. Important factors affecting effectiveness in the culture of the hierarchy include punctuality, efficiency and...
uninterrupted work. The other features did not indicate a change to another type of culture.

Identification of the existing culture and examining what type of culture is preferred by employees are the basis for susceptibility to changes envisaged in the company's strategy [Chuda and Wyrwicka, 2013].

Research shows that employees are satisfied with work, they are loyal and committed. The company has a friendly atmosphere that favors good cooperation. Employees also have development opportunities. These factors have a big impact on efficiency.

Because each production environment is significantly different from the other, they are not standard solutions that fully meet the requirements at the operational level. Probably in any case, industrial practice, the process of developing tailored solutions is necessary, based on general guidelines of established planning and production control systems [Hadaś and Cyplik, 2012].

Source: own work

Fig. 2. Profiles the culture of the distinct organizations
The production process and technology used are other factors affecting the organizational culture. Their specificity is reflected in the organizational structure and it is a visible measure of differentiation. In large and medium-sized enterprises, there is a tendency to use bureaucratic, hierarchical structures, which is largely forced by the production process. It seems, therefore, that organizational culture will also be largely based on hierarchy and bureaucracy [Aniszewska, 2014].

The company being the subject of the research due to the specificity of the product range requires continuous extension of knowledge about the latest technologies and modern solutions in the industry. When introducing any changes to the company, it is the most important that the product manufactured is of the highest quality and highest quality. Diagnosis organizational culture in the case of leadership and management, the change indicates adhocracy. This may be a reason for creative solutions. Flexibility and the ability to adapt to change will also be important.

In the type organizational culture as an adhocracy, the dominant values that are important performance indicators are: innovative ideas, innovative solutions and creativity would like state desired for adhocracy. Design thinking to where interdisciplinary teams, rapid prototyping, user co-creation solutions are just some examples of specific methods promoted by designers and design thinkers that can leverage innovative activities of the organization.

According authors on it use design thinking can give in organizational a lot of benefits.

CONCLUSIONS

Organizations that are part of the real world are subject to change. Changes are classified in different ways. However, in most cases they take the form of a certain process, and their success is conditioned by a lot of factors. The numerous conditions on which the ability to effectively carry out changes in the enterprise depends on its culture. It is a specific creation of the organization, which is a collection of patterns of thinking, behavior and action of all its members.

Based on the analyzed enterprise, it can be noticed that the identification of culture is an important element during changes in the enterprise. The dominant type of organizational culture was determined using the competitive value model. An attempt was made to indicate activities that affect on changes and introduction of design thinking supporting this process.

In the course of the conducted research, it was stated from the information obtained that employees are satisfied with work in the enterprise; they are committed, ambitious and also focused on cooperation and mutual assistance. Organizational culture in the course of changes in an enterprise has a decisive impact on employees' abilities and inclinations to develop and implement new ideas.

In order to effectively support the introduction of changes in the company, it is necessary to make a diagnosis of the culture that is in it and to determine its type. Awareness of this fact allows to pay attention to the organizational culture and undertaking in its area such activities that will make it a factor supporting changes in the enterprise, necessary to achieve its goals. Bearing in mind the specificity of the company and its method of operation the introduction design thinking can give many benefits.

This article presents the results of the analysis of organizational culture in a selected company. The obtained results allow to develop conclusions about the current state and the desired organizational culture. The analysis of individual features of the organizational culture allows to formulate and present selected guidelines on how to go through the change process in an enterprise to obtain measurable benefits in implementing the strategy, as well as in the development of communication.
A case study related to the use of the competing Cameron and Quinn values model showed problems in the analyzed enterprise, which can be solved by introducing changes. The authors noticed that the diagnosis of the organizational culture based on the model used shows the differences between the present state and the desired state. Based on the research carried out by the authors, in which the organizational culture was identified and the differences between the current and desired state were identified, it is possible to determine the direction of further actions related to the introduction of changes in the company using design thinking but important is for innovation needs to be embedded in an organizational culture capable of continuously anticipating and adjusting to change.

According to Elsbach and Stigliani on the use of design thinking in organizations provides new insight into the value of this increasingly popular approach to problem solving. In general, it suggests that the use of design thinking tools in organizations triggers an experiential learning process that ultimately supports the development of organizational cultures defined by a user-centric Focus, collaboration, risk taking, and learning, which in turn support the further use of design thinking tools [Elsbach and Stigliani, 2018].

The authors of the study noticed during the analysis of literature and research that applications of design thinking in the analyzed company could contribute to changing expected organizational culture.

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DIAGNOZA KULTURY ORGANIZACYJNEJ, JAKO CZYNNIK ZMIANY W KONTEKŚCIE ZASTOSOWANIA DESIGN THINKING

STRESZCZENIE. Wstęp: Badania literatury i analiza sytuacji w praktyce biznesowej wskazują, że kultura organizacyjna jest ważnym wyznacznikiem, który może hamować lub pomagać we wdrażaniu zmian adaptacyjnych, proaktywnych i proinnowacyjnych. Nowe sytuacje pojawiają się w otoczeniu zewnętrznym i wewnętrznym, a także nowe uwarunkowania wynikające z postępu technicznego i technologicznego zobowiązują przedsiębiorstwa do adaptacji, a nawet przewidywania zmian. Gotowość do modyfikacji występuje, gdy pracownicy nie są zadowoleni z istniejącej kultury organizacyjnej i wolą inną. Diagnoza rozbieżności między istniejącą a oczekiwaną kulturą organizacyjną pozwala nam ocenić chęć zmiany sytuacji w przedsiębiorstwie. W artykule przedstawiono studium przypadku skupiające się na identyfikacji faktycznej i pożądanego stanu kultury organizacyjnej w celu zdiagnozowania gotowości załogi do zmian w firmie i możliwości zastosowania myślenia projektowego jako sposobu wdrażania innowacyjnych rozwiązań.


 Wyniki i wnioski: Wyniki badań ujawniają dysonans między stanem obecnym a pożadanym i umożliwiają ocenę chęci i gotowości pracowników firmy do zmiany oraz możliwość wykorzystania myślenia projektowego. Celem badań było zidentyfikowanie luki badawczej jakim jest diagnoza kultury organizacyjnej jako czynnik zmian oraz możliwości wykorzystania myślenia projektowego w procesie zmiany. Kultura organizacyjna w trakcie zmian w przedsiębiorstwie ma decydujący wpływ na zdolności pracowników oraz skłonność do opracowywania i wdrażania nowych pomysłów.

Słowa kluczowe: kultura organizacyjna, zmiany w organizacji, myślenie projektowe, konkurencyjny model wartości, innowacje

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