

Sabina MOTYKA, Natalia LUKASIK

Politechnika Krakowska
motyka@mech.pk.edu.pl
nat.lukasik@gmail.com

CREATING A CLIMATE OF INNOVATION AS A CONDITION OF THE DEVELOPMENT SME

Key words

Innovation, personnel, business innovation, culture innovation, SME.

Abstract

Environmental instability pressures companies constantly to change their products, services and processes. Not taking innovative activities in organisations possess a risk of losing their market position. Taking action in the innovation area and creating an environment supporting the development of new ideas is very important for SMEs. Introducing innovation in organisations is often joined with resistance from workers. This depends on the ossification of organisational structures, stereotyping, the lack of resources, or the fear of the novelty. Creating and introducing innovation in a company could be inhibited by a series of barriers: economic or psychosocial. Resistance to change is a complex process and affects the speed and quality of improvements. One should especially consider the types of barriers that the organisation can independently affect or even prevent, e.g., psychosocial barriers from workers. The issue of creating a climate of innovation in a Polish company from the SME sector is not often researched, but it happens in international companies. Research over the years by the authors about manufacturing companies confirms that the problem of psychological barriers is common. The aim of the article is to show the special role of employees in supporting innovation of Polish companies from the

SME sector. Every company has a chance to be innovative, but it has to be consciously and systematically pursued. Innovation in organizations should be planned and consistent with strategy of the company. Searching for sources of innovation and evaluating the possibilities of their implementation in specific conditions, including one of the most important factors – humans, innovation activities can bring success.

Introduction

In today's volatile economic environment for businesses, the dynamic processes of globalization in the maintenance and development of the organization is the ability to create innovation. The ability of innovative companies is determined by their intrinsic ability to create new products and technologies, methods of organization, and by their ability to absorb and use knowledge generated outside the company [1]. These activities require appropriate technical competence, managerial skill, and the ability to learn. This encourages organizations to undertake and develop their skills, resources, and learning.

The process of building a competitive advantage for SMEs on the domestic market and the related problems are often associated with a low level of innovation in companies. At the same time, the transfer of research results to the Polish economy producing development is due to the low interest among entrepreneurs in activities and the commercialization of innovative research and the lack of competence of persons involved in these processes [2]. To effectively mitigate these barriers, it is advisable to undertake educational and promotional activities aimed directly at employees of companies who have the greatest impact on the quality and development of the technology needed to compete in the market [3].

Product innovation, process innovation, organizational innovation, and marketing innovation are fundamental factors in the company's position in the market. The need to introduce continuous developments and improvements by the owners and managers of businesses as well as the entire staff seems particularly important. The aim of this article is to develop a set of actions to be implemented in companies in order to reduce barriers to innovation by staff, which is a significant problem in today's SMEs.

1. Innovation in SMEs

Researches into innovation level of domestic SMEs were carried out recently by Haffer [4], Mizgajska [5], Jasiński [6], Żołnierski [7]. The scope of the research projects comprised selected companies of different branches from various locations in Poland. Only research done by Jasiński and Żołnierski covered generally all provinces of Poland. In most cases significant obstacles for

innovations were identified, with lack of specialists and resistance to changes as the dominant ones.

Over the years, there have been many of barriers existing in the setting up of innovative companies in Poland, including SMEs, which is also confirmed by a recent study on mechanical engineering companies carried out by the author [8]. They focused on the analysis and evaluation of the level of innovation of Polish machine based enterprises on surveys conducted during the International Trade Fair of Machine Tools, Tools, Devices, and Equipment for Material Processing EUROTOOL 2014 in Cracow. The study involved only manufacturers in the domestic market. The study involved 35 companies, mainly small and medium-sized enterprises. In addition, a similar study was carried out in previous years, as described in [9]. It directly results from a study from 2014 that the main barriers to innovation for the surveyed companies, next to a limited budget (54% of companies) and difficulty in obtaining outside funding (for 51% of companies), are the employees themselves – 14 companies (40%) answered that the barrier is the reluctance of workers to change. Compared to the 2009 study [9], there is a growing barrier on the side of the companies' employees themselves – their aversion and concerns about the changes, and the lack of appropriate qualifications and experience is increasingly becoming an obstacle to innovation.

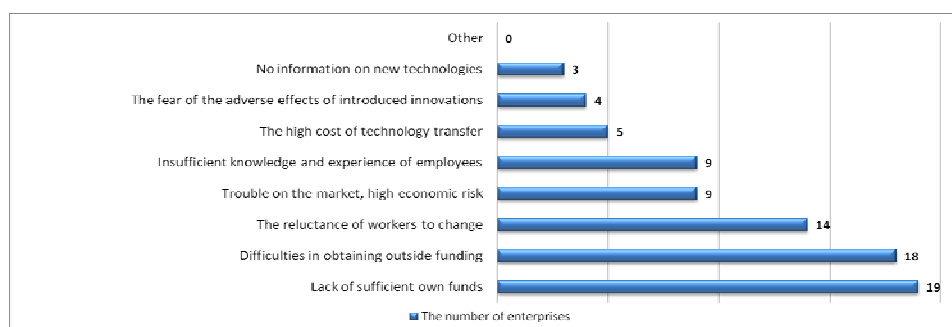


Fig. 1. Barriers to implementation of innovations [8]

To the question whether employees participate in trainings, seminars, or workshops regarding innovation, nearly half of the respondents answered that their employees participate in such meetings. These companies use both third-party services, as well as provide training or seminars internally. 17 companies participating in the study answered that their employees do not participate in such meetings. The results of these studies confirm that major problems in the development of the innovation potential of the SMEs sector are psychosocial barriers, from both workers and managers. The results indicate that the examined enterprises need action in the form of training, working meetings/design

workshops, self-education, training grants, etc. Due to the fact that Polish companies has been said to be too little innovative it seems necessary to start changes in areas of innovation process organisation and creation of relevant culture supporting innovation [10, 11, 12]. Polish companies still lack the competence for innovation.

Despite little sample of companies studied (due to restrictions set by criteria of selection: capital – Polish, size – SME, type – manufacturing) one can conclude that situation of studied companies is similar to those presented in results of other researchers [4, 5, 6, 7]. Therefore, authors of the paper consider model proposed herein as relevant for Polish industrial companies of different branches.

As a result of rapidly developing technologies and changing internal and external environment, including law, companies face the challenge of developing a system of continuing education to prepare staff for the implementation of innovative processes in modern enterprises.

2. Innovation culture in company

Managing knowledge accumulated by the company is the basis for the development of innovation. The intellectual capital of the company based on processes of continuous learning, gathering knowledge and their dissemination are all elements that help to create a culture of innovation.

Organizational culture is a set of certain values and norms of conduct prevailing in the organization. This culture is reflected in the behaviour, attitudes and reactions, the approach to solving the problems individuals, or being in social groups.

The influence on the culture of the organization is also found in workplace – production areas, offices, and interior aesthetics. The climate of innovation culture is characterized by flexibility, high tolerance for uncertainty, and dynamics of action. The main task of an innovation culture in a company is to support the innovation process.

In terms of system innovation processes, an interdisciplinary process involving the creation, diffusion, adaptation and innovation analysis and result of innovation [13] or the result of a kind of complicated, continuous relationships and interactions between individuals, community organizations and their activities are important [14]. The concept of showing the innovation process as a result of analysis is found in the relationships between the creation of a learning organization and the organization of knowledge and innovation organizations, and it is expressed in a spiral model [15].

The company focused on innovation should stand out with clearly defined strategies and innovation purposes. The achievement of planned objectives should be supported through cooperation and teamwork. A culture of innovation is based on the frequent training of employees, training creativity, and building a

positive atmosphere in the company. Innovation is a process developed by all departments of the company such as manufacturing, commercial, administrative, and marketing. To make the process run smoothly and make sure innovation will have positive effect, the organizational structure should have integrated departments with a high degree of communication and flow of information or cooperation between the departments. An important factor is having the right people in the highest positions – executive board. To succeed, we need people full of energy and enthusiasm, able to face the challenges.

Summing up, the internal components that have a direct influence on the growth of the innovation climate are a unified vision of organization, leadership, a willingness to be innovative, an appropriate organizational structure, creative teams, and the involvement of employees (Fig. 2). With these components, one can effectively implement the objectives of the innovative organization.



Fig. 2. Influences on the culture of innovation [16]

Innovative company culture is an element that needs to be constantly improved. The main cultural visions needed to support innovation are a focus on the future, openness to change, willingness to take risks and experiment, creativity, mutual tolerance for mistakes, and multiple support and cooperation. There must be a common goal, vision, and faith in action leading to a desired result.

The main exemplars for the culture of innovation is taking risks, tolerance, teamwork, speed of action, and making decisions. In companies where there is a culture of innovation, employees are likely to cope with uncertainty, based on their knowledge and experience.

They are formed a cooperative network by setting up task forces. Managers use a management style that is conducive to independent actions of employees, so that they have the initiative and make their own decisions. A culture of innovation means an atmosphere of freedom, time, and a place of work where a level of

mistakes is tolerated. Innovation in a company should begin with the right people. At the recruitment level for companies of different industries, there should be a search for people who are graduates of Management and Production Engineering, where they learned about management strategy, the development and implementation of innovation, production management, quality, service, and innovative product development.

Also noteworthy are any issues about the social impact of innovation known as “Technology Assessment” [17] or competence in the assessment of the implementation of new technologies and products to various aspects of society, taught in the context of the Management and Production Engineering.

Production engineering is an interdisciplinary field of study at the Faculty of Mechanical Engineering of the Cracow, which is adapted to the needs and expectations of employers and labour market requirements, allowing one to obtain knowledge of the design of products and processes, basic control, operation, organization, and management of manufacturing processes. Production engineering graduates find employment in small, medium, and large manufacturing and service companies, in the design and consulting firms, and other economic and administrative units, which require technical expertise, information technology, and economic understanding. During the course, students learn the about issues in the following areas: creating a climate of innovation in organizations, technology transfer and innovation management within the subjects of innovation and technology transfer and intellectual property protection.

3. The role of employees in creating a climate of innovation in SMEs

Based on the analysis of domestic and foreign companies with a highly developed level of innovation, the authors have created a model of implementation innovation. It could be used as a guide by the company creating the role of employees in the process of innovation.

Tips are created mainly for small and medium-sized companies in which innovative activity is not started or is still in the early level of implementation.

People in all positions in company are responsible for innovation, so the innovation process should start at the recruitment. It is important to hire people with the innovators personal characteristics who are not afraid to take risks. A company can create workplaces, where personal duties include responsibility for the management of the innovation process. It is important that system work is flexible and determined in relation to the position of employment. It is important to provide a personal space for each worker that is ergonomically adapted to the needs of the staff. In the process of creating innovation, a huge role is the implementation of an organizational culture based on teamwork. Grouping project teams should be done in terms of culture, experience, or skills. This operation contributes to the wider horizon approach.

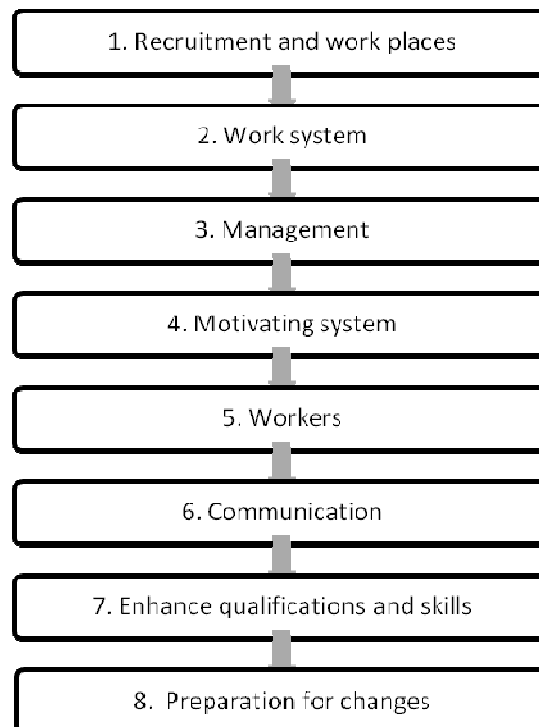


Fig. 3. Impact on innovation company (own work)

Creating a workplace conducive to the development of innovation, the company must pay attention to communication in the company and management's approach to their subordinates. The company should be particularly concerned about the creation of a positive relationship between the head of management and employees. Regular information meetings with middle management are helpful. The company should demonstrate a willingness to create two-way communication and open dialogue with employees, which may include a lot of trainings and workshops for the staff. Forming a public database of information about a current projects, the composition of the teams, and suggestions for the company's operations should also be done. These activities give employees the opportunity to decide about the company and then increase their involvement in the company's issues.

Management must demonstrate their commitment and understand the process of the implementation of innovations to effectively lead the subordinates and organization through the changes that are related with this process. The leader should have the ability to create a workplace conducive to creative approaches for the performance of duties. In each innovated project, there is an inscribed risk related to the failure of a new project and material losses. Effective risk management is another feature of a good leader. Managers who

use an innovation-oriented approach to personnel management actions often persuade employees to action rather than give specific commands. They create a strong team, with commitment, and share awards and recognition. The foundation for leaders to pursue innovation is the combination of team management skills and motivation as well and the proper level of sharing information with employees.

Management should take the following actions:

- Motivate and encourage the activities of employees;
- Determine ambitious goals, while developing competence;
- Have an openness to ideas and a tolerance of mistakes, while rewarding all work efforts;
- Take an individual approach to each employee and his or her needs;
- Pass the company's philosophy down to subordinates; and,
- Overcome the barriers produced by the fear of failure in workers.

The innovative organization should be aware of the importance of a bonus system for employees. The system will be appreciated where the staff awards are valuable to the employees. The most common motivators are praise, reward, and material and non-material (e.g. promotions) incentives. The company should develop a system to motivate employees based on the following features:

- A personalized reward system corresponding to the aspirations and expectations of employees (funding courses of study, training, conferences relevant to your interests, and a learning profile);
 - Rewarding innovative idea competitions;
 - Benefits (e.g. discounts for sports centres and cultural events); and,
 - Celebration of individual success, as well as corporate events.

People are the foundation of innovation, and their satisfaction with the performance of their duties directly reflects in the results of their work. The innovation potential of a company depends on the people working there. Employees should be aware of the company's mission, and know the impact of their work on the development and on the position of the company. They should have a chance to develop, expand their horizons, and get satisfaction from these things. Employees represent the company, and their attitudes represent the ideas, principles, and the company's brand. Their development should benefit themselves and the organization.

The company should ensure that the following are provided:

- An awareness of the purpose, meaning, and impact of personal work to the development of the company;
 - Freedom of action, where the workers personally decide the quality of their work and the value of their hard work, commitment, and results;
 - Employees develop a passion for their work that provides opportunity for their development and promotion;
 - People with different experiences and skills are connected so that they can learn from each other and broaden their view of the problem; and,

- Innovative activities are include in the scope of the responsibilities of each employees;
- Continuous improvement skills of all employees - creating a learning organization: training and workshops.

Communication inside the organization has influence on the behaviour of people working in it. It is important to develop a system of effective communication in the company by the following:

- Direct Communication: regular information meetings;
- Communication: information boards, newsletters, newspapers, including Internet resources (e.g., email, forums, chat rooms, and video meetings) and Intranet (e.g., internal electronic portal, internal conferences, and webcasts);
- Having no barriers between the cells of the company – anyone can ask anyone regardless of their position;
- A place where you can share your ideas (e.g., a special information board or suggestion box);
- Regular meetings with groups of employees to inform them about the achievements and activities of the individual units; and,
- Training and workshops.

The task of employees is to prepare for rapidly changing markets by observing and analysing the actions of competitors. Management should ensure the capacity to build the organization, which allows a flexible response to change, and to use the opportunities and possibilities offered by the environment. Changes in the organization should provide the possibility for individual development to acquire new competencies, adapting to new roles, and overcoming barriers. The diversity of the organization and their specific activities in any business process of innovation implementation may look differently. Developing innovation system requires a lot of tests and learning based on making mistakes. The implementation process of innovation requires lot of work and commitment, and it is associated with many changes. This is connected with revolution in the company, tearing down existing structures, learning, and perfecting new solutions, so that they become an integral part of the company.

Summary

Modern organizations should strive to become learning organizations, constantly reinforcing opportunities to shape their own future [18]. With the learning processes taking place in them, they can make changes, even in the area of organizational culture, to adapt to progress in the environment.

Among the many elements of the contemporary system of the continuing education of employees, the following can be distinguished [19]: job rotation, reading professional literature, and the participation of workers in training and internships, mentoring, coaching, and employee participation in formal

education, for example, extramural studies, and post-participation of employees in conferences and fairs. These actions, and especially those presented in the framework of the model (Fig. 3), should serve as the basis for national SMEs in starting or improving the climate and culture of innovation.

References

1. Stawasz E., Głodek P., Stos P., Wojtas J.: Potrzeby innowacyjne przedsiębiorstw z województwa łódzkiego. Łódź 2003. www.ris.lodzkie.lodz.pl/doc/innowacyjnosc.doc.
2. Łobejko S., Sosnowska A.: Komercjalizacja wyników badań naukowych. Praktyczny poradnik dla naukowców. Urząd Marszałkowski Województwa Mazowieckiego, Warszawa 2013.
3. Symela K.: Szkolenie specjalistów do spraw komercjalizacji innowacyjnych technologii. Edukacja Ustawiczna Dorosłych, 2/2014.
4. Haffer M. (red. nauk.), Haffer R. (red. nauk.): Aktywność innowacyjna małych i średnich przedsiębiorstw Pomorza i Kujaw. Wydawnictwo UMK, Toruń 2008.
5. Mizgajska H.: Aktywność innowacyjna małych i średnich przedsiębiorstw w Polsce – zmiany i uwarunkowania. Wydawnictwo UE w Poznaniu. Poznań 2013.
6. Jasiński H.J.: Innowacje małych i średnich przedsiębiorstw w świetle badań empirycznych. Promocja XXI, Warszawa 2009.
7. Zołnierski A.: Potencjał innowacyjny polskich małych i średniej wielkości przedsiębiorstw. Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2005.
8. Motyka S., Nowak J.: Innowacyjność polskich przedsiębiorstw przemysłu maszynowego (stan aktualny i prognozy). Innowacje w zarządzaniu i inżynierii produkcji pod redakcją R. Knosali. Oficyna Wydawnicza Polskiego Towarzystwa Zarządzania Produkcją, Opole, 2015, s. 128–140.
9. Motyka S., Jachimowski A.: Innowacyjność polskich przedsiębiorstw przemysłu maszynowego – bariery i szanse rozwoju. Oficyna Wydawnicza Polskiego Towarzystwa Zarządzania Produkcją, Opole 2010.
10. Trompenaars F.: Kultura innowacji. Kreatywność pracowników a sukces firmy. Oficyna a Wolters Kluwer business, Warszawa 2010.
11. Drucker P.F.: Praktyka zarządzania. AE w Krakowie, Kraków 1998.
12. Motyka S.: Wewnętrzne uwarunkowania kreowania systemu innowacji w organizacji. Innowacje w zarządzaniu i inżynierii produkcji, pod redakcją R. Knosali, t. I, Oficyna Wydawnicza Polskiego Towarzystwa Zarządzania Produkcją, Opole, 2013, s. 209–219.
13. Strambach S.: Change in the Innovation Process. New Knowledge Production and Competitive Cities – the Case of Stuttgart, Europe Planning Studies, t. 10, nr 2, 2002.

14. Podręcznik Oslo: Zasady gromadzenia i interpretacji danych dotyczących innowacji, 2008.
15. Merx-Chermin M. Nijhof W.F.: Factors Influencing Knowledge Creation and Innovation in an Organization, *Journal of European Industrial Training*, t. 29, nr 2, 2005.
16. Tidd J., Bessant J.: Zarządzanie innowacjami: integracja zmian technologicznych, rynkowych, organizacyjnych. Wydawnictwo Wolters Kluwer, Warszawa 2011.
17. Kaźmierczak J.: Zagadnienia interdyscyplinarne w programie studiów na kierunku „Zarządzanie i Inżynieria Produkcji”. *Innowacje w zarządzaniu i inżynierii produkcji* pod redakcją R. Knosali. Oficyna Wydawnicza Polskiego Towarzystwa Zarządzania Produkcją, Opole 2015, T. II, s. 877–887.
18. Senge P.M.: Piąta dyscyplina. Teoria i praktyka organizacji uczących się. Wolters Kluwer, Kraków 2006.
19. Sison P.: *Personnel and Human Resources Management*, Personnel Management Association of Philippines, Mandaluyong City, 1991.

Tworzenie klimatu innowacyjności jako warunek rozwoju MŚP

Słowa kluczowe

Innowacje, personel, innowacyjność przedsiębiorstwa, kultura innowacji, MŚP.

Streszczenie

Zmienność otoczenia zmusza firmy do ciągłych zmian swoich produktów, usług i procesów. Niepodejmowanie działalności innowacyjnej w organizacjach oznacza ryzyko utraty dotychczasowej pozycji rynkowej. Uświadomienie, zrozumienie i podjęcie działań w obszarze budowania innowacyjności oraz tworzenie środowiska sprzyjającego rozwojowi nowych idei ma współcześnie ogromne znaczenie dla rozwoju MŚP. Wprowadzanie innowacji w organizacjach napotyka często na różne opory ze strony personelu, wynikające zarówno ze skostnienia struktur organizacyjnych, stereotypowego myślenia, braku zasobów, obaw przed nowym. Kreowanie i wprowadzanie innowacji może być utrudniane (czasami nawet uniemożliwiane) przez szereg barier o charakterze biurokratycznym, ekonomicznym czy psychospołecznym. Opory wobec zmian mają złożoną naturę, wpływają na szybkość oraz jakość usprawnień oraz często są specyficzne tylko dla konkretnych organizacji. Na uwagę zasługują szczególnie te rodzaje barier, na które organizacja może samodzielnie oddziaływać, a nawet im przeciwdziałać, czyli bariery psychospołeczne istniejące po stronie personelu. Pro-

blematyka kształtowania klimatu innowacyjności w polskich przedsiębiorstwach z sektora MŚP jest rzadko badana w przeciwieństwie do firm międzynarodowych. Badania przedsiębiorstw przemysłu maszynowego przeprowadzone przez autorkę na przestrzeni lat potwierdzają aktualność tego problemu. Celem artykułu jest ukazanie szczególnej roli personelu we wspomaganiu innowacyjności polskich przedsiębiorstw z sektora MŚP. Każde przedsiębiorstwo ma szansę być innowacyjne, jednak musi do tego świadomie i systematycznie dążyć. Wprowadzanie innowacji w organizacjach powinno być działaniem zaplanowanym oraz spójnym z obraną strategią przedsiębiorstwa. Dzięki poszukiwaniu źródeł innowacji, jak i ocenie możliwości ich wprowadzenia w konkretnych warunkach, z uwzględnieniem jednego z najważniejszych czynników, jakim są ludzie, działalność innowacyjna może przynosić sukcesy.