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NON-TECHNOLOGICAL INNOVATIONS AS DEVELOPMENT DETERMINANTS FOR COMMUNITIES (CASE STUDY OF PCIM COMMUNITY - part II)

SUMMARY: The aim of this study is to identify the nature and importance of non-technological innovation, as well as indicate the way non-technological innovation affects the development of a community. The study, which was a research publication, is the second part of the article "Technological Innovations in Pcim Community," which appeared in No. 9 of the Authority in 2012. The analysis will be conducted in the community of Pcim. The study will use interviews and a questionnaire with a five-point Likert scale. The article will attempt at creating a model with recommendations on how to use innovation management as a determinant for community development. Practical implications will include some proposals for community authorities regarding areas that should undergo significant transformations to ensure community development. The work adopted the following research hypothesis - the implementation of non-technological innovation affects the development of municipalities. Keywords: community management, non-technological innovations, innovation management, transformation
Article category: research publication

Introduction

This article is the second part of the article Fri "Technological Innovations in Pcim Community," which appeared in No. 9 of the Authority in 2012. In the world of constant change, an organization's success depends on how quickly it responds to the turbulent environment. The traditional approach to management saying that the environment is stable has been superseded by globalization, new technologies and rapidly changing environments. The term success refers to those organizations which are flexible, intelligent and able to learn. Those organizations particularly value the concept of innovation management. Today's new

management concepts, such as new economy, new technologies, or hyper-competition force organizations to introduce large and radical changes not only in terms of technologies but also in innovation management.

The aim of this study is to identify the nature and importance of non-technological innovation, as well as indicate the way non-technological innovation affects the development of a community. The study, which was a research publication, is the second part of the article "Technological Innovations in Pcim Community," which appeared in No. 9 of the Authority in 2012. Opracowanie jest drugą częścią artykułu pt." Technological Innovations in Pcim Community",który ukazał się w nr 9 EiOP w roku 2012. Opracowanie ma character badawczy. The analysis will be conducted in the community of Pcim. The study will use interviews and a questionnaire with a five-point Likert scale. The article will attempt at creating a model with recommendations on how to use innovation management as a determinant for community development. Practical implications will include some proposals for community authorities regarding areas that should undergo significant transformations to ensure community development . The work adopted the following research hypothesis - the implementation of non-technological innovation affects the development of municipalities.

The concept of innovation management

The model of innovation management consists of three pillars: organizations should work towards creating their own environment; strategic management shapes the proposals of organizational structure; and selected organizational structure and processes shape the strategy. Introducing changes in structure, strategy and processes requires new approaches to management. The idea describing changes in the approach to the strategy is a result of changes that are visible in the business environment. It is necessary to introduce new management methods with the assumption that the environment is in the state of constant change[1]. In the scope of non-technological innovation we can distinguish new marketing and organizational methods. Improvements in organization and management are called innovation management. Through innovative management should be understood as improvements in organization and management and the adoption of new management methods. Innovative management is therefore a departure from the old ways. In theory, you can often find that it is practiced in large enterprises, which is not true. Innovative management such as technological innovation apply to all organizations.Poprzez innowacyjne zarządzanie rozumieć należy

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[1] A. Drejer, *Situation for innovation management: towards a contingency model,* European Journal of Innovetion Management, no. 1, 2002, p. 4-5.

usprawnienia w zakresie organizacji i zarządzania, przyjęcie nowych metod zarządzania. Innowacyjne zarządzanie oznacza zatem odejście od starych sposobów postępowania. W teorii często odnaleźć można, że jest ono praktykowane w dużych przedsiębiorstwach, co nie jest prawdą. Innowacyjne zarządzanie tak jak innowacje technologiczne dotyczą wszystkich organizacji. Innovation management departs from old ways of doing things. According to management theories, it is only present in large organizations. This is not the truth yet. Innovation management, just like technological innovations, concerns all organizations. In the course of innovation management implementation, changes in the following processes occur: planning, employment, promotion, internal communication, and knowledge management. The challenge for innovation in the field of management is to generate new ideas on processes and behaviors and these ideas occur in favorable conditions. Key aspects are the following: formulating problems requiring a new perspective, new paradigms and principles enabling new approach to problems, eliminating barriers to creative thinking and finding examples or analogies that help define new possibilities.

Innovations with respect to management policies and processes can provide organizations with a long-term competitive advantage and development possibilities. They can also "capsize" all relations in the organization.

Innovations in management change the way managers operate and increase the effectiveness and efficiency. In this context, specialist literature refers to the concepts of operational innovation and management innovation. The former concentrates on purely business processes of the organization (production, marketing, order execution, customer service, etc.). The latter focuses on management processes, that is methods and activities that directly influence day-to-day management of the organization[2].

Innovation management is not natural; it is an ongoing effort. It can be learnt but needs conscious commitment. Organizations which implement innovations look at them as something obligatory. These organizations are disciplined, make the constant effort and practice it. Selected areas of innovation management together with explanations why traditional solutions do not bring results are presented in Table 1.

Table 1: Areas of innovation management

Area	Change	Why?
Diffused responsibility	Defining the scope of responsibility	Definition of the scope of responsibility shows employees that they are all equally responsible for new ideas. Diffused responsibility does not contribute to organization growth.
Centralization	Decentralization	Delegating decision making powers with responsibilities

[2] G. Hamel, B. Breen, *Zarządzanie jutra – jakie jest twoje miejsce w przyszłości,* Harvard Business School Press, wyd. Red Horse, 2008, p. 35

		contributes to organization development
Differences	Balance	Definition of balance helps to develop entrepreneurial attitudes. Balance in three areas: strategy, operational activity and organization.
Firm strategy development	Experimenting	It needs to be remembered that strategies that were turned down in the first preparation phases may become useful in later stages. Experiment is the key to strategy formulation.
Focus on experience	Combining experience with creativity	Effectiveness can be increased through: combining new ideas with experienced employees, changing the way of thinking of most senior employees; developing certain skills and buying new ones; creating a new organizational culture.
Autonomy	Integration and autonomy	Too much autonomy prevents learning.

Source: M. Gorzelany-Dziadkowiec, J. Gorzelany-Plesińska, *Opening to innovations in the development of small and medium enterprises*, [in]: *Fundamentals of Management in Modern Small and Medium-Sized Enterprises*, eds. S. Lachiewicz, A. Zakrzewska-Bielawska, Technical University of Lodz Press, Lodz 2011.

Analyzing the statements contained in Table 1, it can be seen that the described areas are crucial in the development of the organization. It is worth spending some time here on how strategies can be developed by trial and error, i.e. by experimenting. As mentioned before, experiment is the essence of strategy formulation, but what is often forgotten is the minimum of discipline and planning. Managers make further attempts and adaptations hoping that the next time will finally bring success. Avoiding such problems is possible only by maintaining balance between chaotic moves such as: "…let's try out this solution; we will see how customers react and we will change our activities depending on their reaction"; and on the other hand between disciplined planning, such as: "…let's think about the market and technology in a systematic way; let's observe at customer needs as long as we are sure we possess the right product, technology or business model". Balance can be obtained by narrowing down the field of activity, learning on small samples, using prototypes and non-financial criteria to evaluate employees and determine the boundaries of when to stop the experiment[3].

In the era of increased competition, particular attention should be paid to changes in marketing methods, because now it is very often the customer who gives sense to the innovation. The customer shapes the perception of innovation. Taking into consideration the impact of the customer on innovation, three main approaches have been identified, which focus on how the customer shapes innovation: first of all, shrinking market segments force an individual approach to customers by creating customized products; secondly, managers and customers need time to propose a solution and it makes some customers complain that the product is bad, that the customer needs have been identified incorrectly and that the

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[3]M. Gorzelany-Dziadkowiec, J. Gorzelany-Plesińska, *Opening…*, op. cit., p.

management reacted too slowly; thirdly, the competition uses computer simulations which help to determine internal new tools used in the development of new products quickly[4]. Introduction of innovation management should be accompanied by changes in customer perception, which should be most important for the organization. New approaches to customers should promise revitalization of the innovation process. Each company prides itself if it can provide customers with what they ask, that is a hit product. Success can be obtained by satisfying customer needs[5].

D. Dougherty and H. Takacs indicate that it is important to create innovation processes in teams, which increases the effectiveness of new projects. Teamwork allows members to push the boundaries created by discipline and hierarchy. Participation in a group task and relationships that are formed here are essential for successful innovation[6]. The role of teams in implementing technological innovation has been presented in Figure 1.
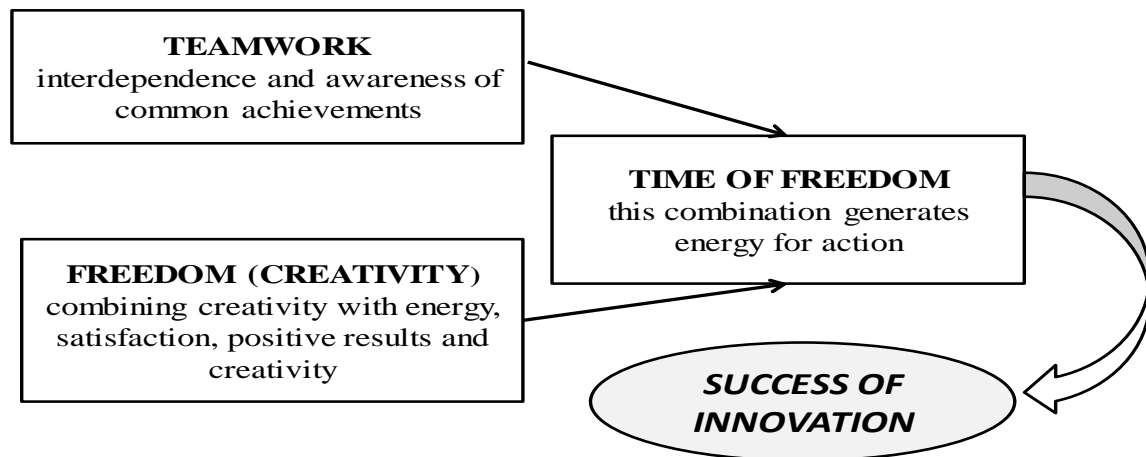

Fig. 1. The role of teams in the innovation process
Source: own work based on D. Deborah, C.H. Takacs, *Team Play: Heedful Interrelating as the Boundary for Innovation,* Long Range Planning, vol. 37, 2004, p. 574.

Based on Figure 1, it can be concluded that teamwork combined with creativity, satisfaction and positive results generates energy for action, which is crucial for organization success. Organizations need people who know what to do and who are aware of the benefits of teamwork. Yet, working in teams requires careful action and ability to adjust to group needs. Freedom manifests itself in satisfaction and positive outcomes. The management should naturally motivate people to act freely because this allows faster adaptation to change. The combination of teamwork with the freedom to act makes it possible to move from

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[4]S. Thomke, E. von Hippel, *Customers as Innovators, A New Way to Create Value,* Harvard Business Review, April 2002, p. 76-77.

[5] A. W. Ulwick, *Turn Customer Input into Innovation,* Harvard Business Review, January 2002, p. 91.

[6] D. Dougherty, C. Helen, *Team Play: Heedful Interrelating as the Boundary for Innovation,* Long Range Planning, vol 37, 2004, p. 569.

cautiousness (visible when the groups are formed) to interdependence; it makes it possible to deviate from the procedures and rules towards assigning tasks and building relationships. In innovative organizations, people create multi-functional teams. In non-innovative organizations, they do not know how to create a team. Team freedom is dictated by teamwork, whilst the structural context defines the boundaries of action. Yet the rules are formed in such a way as to ensure freedom of action[7].

Summing up the discussion regarding innovation management, it becomes clear that this process relates to changes in procedures and operation rules. Innovation management can provide sustainable competitive advantage if at least one of the following three conditions is satisfied: innovation is based upon a new management principle which goes against the previous tradition; innovation is systematic, it embraces the whole of methods and activities; innovation is part of a wide innovation program, whose effects accumulate with time. Another factor which is very important to innovation success is teamwork.

Innovation management in a community

A community is a complex system with specific functions and tasks. Also, it is a specific organization whose mission is to meet the needs of its residents. As a result, the implementation of innovation management may on the one hand contribute to community development; on the other, these processes can facilitate and accelerate the implementation of community tasks.

Innovation management in a community will cover the sphere of marketing and management. Innovation in marketing turns particular attention to the customer as well as the use of the Internet in promoting and advertising the community. Innovations in management concern procedures and rules of conduct; they can relate to incentive systems, information systems or delegation of tasks together with responsibility. Non-technological innovation in a community was presented in Figure 2.

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[7] D. Dougherty, C. Helen, *Team Play …*, , p. 573 - 575.

NON TECHNOLOGICAL INNOVATION IN COMMUNITY

facilitate management process

in management

in marketing

increase effectiveness

•application of IT in management
•use of innovation potential of employees
•improvement of service quality
•creation of modern management structures
•changes in planning
•changes in management styles
•changes in leadership and motivation

•application of marketing mix
•changes in customer service
•creating e-services
•promotion of the community
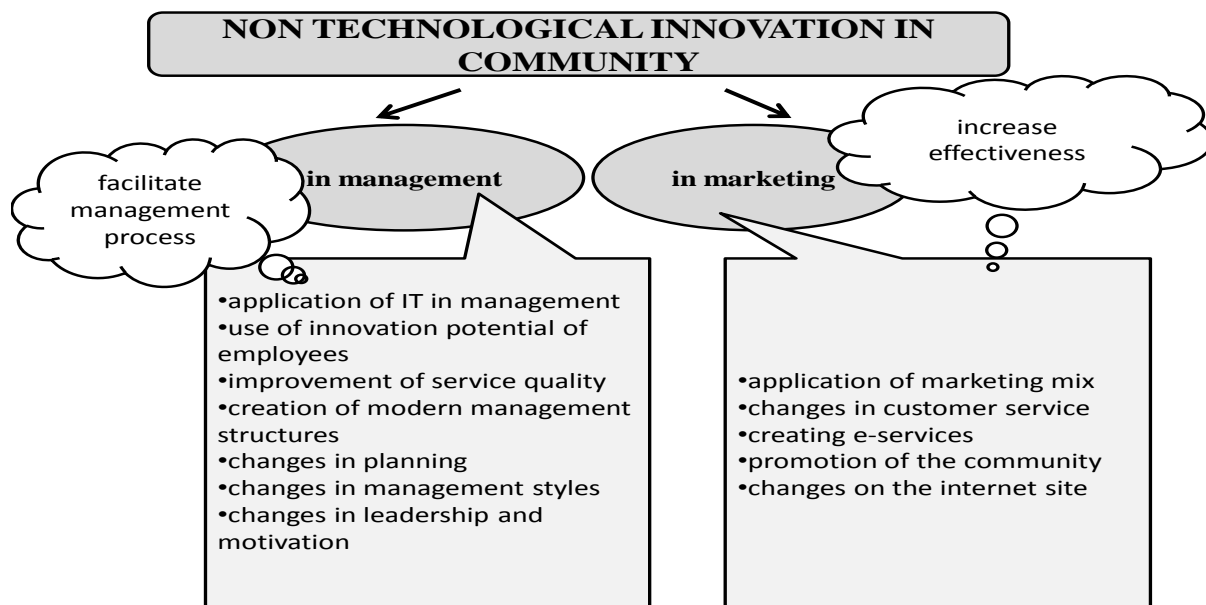•changes on the internet site

Fig. 2. Non-technological innovations in a community
Source: own study

Based on Figure 2, it can be concluded that innovation management in the community mainly relates to changes of rules and procedures within the community office. Innovation management in communities should mainly focus on changes in management, organization structure, team management (reducing bureaucratic procedures), and in customer service. Innovation management in a community must have a comprehensive approach; it needs to be a leader not a bureaucrat. Comprehensive approach means that rearrangement of state institutions requires something more than just presenting a framework in the organizational scheme. Community can function higher than average if it is possible to combine and balance a number of factors: leadership, organization structure, processes, infrastructure (including technologies), human resources (releasing the enthusiasm for action and changes in behavior styles from bureaucrats to leaders). What is equally important is encouraging the employees to depart the previously accepted behavior patterns. The natural approach of community officials is to create barriers. Departing from this paradigm will not mean that the barriers are not respected at all, but it is necessary to find a way to look above and beyond barriers[8]. Sometimes just the sole desire to help solve a problem is enough. The introduction of changes in management is difficult both in companies and organization such as communities.

Another non-technological innovation area in communities is marketing. Innovations in marketing are created by changes in marketing methods. In the context of the marketing mix (price, product, promotion and place), the community produces services for its customers,

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[8] Gorzelany-Dziadkowiec M., *Wpływ procesów innowacyjnych i operacyjnych na rozwój obszarów wiejskich (na przykładzie gminy Michałowice),* Barometr Regionalny, no 3, 2012, p. 123.

the price is time the resident must spend on solving his issue, place is the way the community reaches residents with its products, promotion is the way of promoting the area. Therefore, when it comes to shortening the time and manner of service, this largely depends on the implementation of new procedures and rules referred to above. As far as promotion and place are concerned, it is necessary to make changes in the use of IT and ICT systems in community management. Communities should for example maintain their computer sites, which will help residents to learn about the community.

Non-technological innovations in the community of Pcim - empirical analysis

The community of Pcim is situated in the south-eastern part of the mountain range of the Makow Beskids, in the district of Myślenice, Malopolska Province. The community consists of three villages: Pcim, Stróża and Trzebunia, with a total population of 10700 inhabitants. The location along the main road S7 Krakow-Zakopane makes the community easily accessible for tourists. The distance from Krakow is 46 km and from Zakopane – 61 km.

The study consisted of an interview and a questionnaire with a five-point Likert scale (where 1 meant that actions are not taken at all / not implemented in the community, 2 - actions are rarely taken / implemented, 3 - actions are sometimes taken / implemented, 4 - actions are often taken / implemented, 5 - actions are very often taken / implemented). The aim of the study was to answer the question whether the community implements non-technological innovations, both in management and in marketing. The obtained results have been presented in Table 2.

Table 2: Non-technological innovations in the community of Pcim - study results

Innovation	Evaluation scale				
	1	2	3	4	5
Innovation management:					
Is the community implementing changes in:					
Management	x				
organization structure		x			
team management styles (reducing bureaucracy)		x			
Are scopes of responsibilities clearly defined?		x			
Is decision-making authority delegated?		x			
Is experience combined with creative thinking?		x			
Are the rules being changed?			x		
Is employee performance evaluated?				x	
Are leadership styles changing?			x		
Are motivation systems changing?	x				
Is the community conducting marketing activities?				x	
Is the community being promoted?				x	
Are there any changes introduced in its Internet site?				x	
Is the community using modern marketing methods?			x		
Doe the changes mentioned above impact community development?				x	

Having analyzed the results of studies presented in Table 2, we can conclude that the community in questions does not implement non-technological innovations in a sufficient degree. The actions that are already taken mainly fall into the scope of marketing (marketing activities, the community is promoted, there are some changes at its Internet site). When it comes to innovation management, no steps aimed at implementing it are visible. The community has never introduced any changes in management and motivation systems. Also, changes in the organization structure and team management styles are very rare. The community rarely defines responsibility scopes, decision-making authority is rarely defined and people rarely combine experience with creativity. Sometimes however, the rules and leadership styles are changed. Also, modern marketing methods are occasionally used. Nevertheless, community authorities are aware that changes in management and marketing influence the development of the community.

Recommendations and proposals for the analyzed community

Having analyzed the implementation of non-technological innovations in the community of Pcim, one can conclude that there is a need for significant improvements in that respect. Local leaders should mainly focus on the implementation of innovation management. The departure from procedures and rules as well as excessive bureaucracy would contribute to the community development. Local authorities should also focus on the entire process or human capital management.
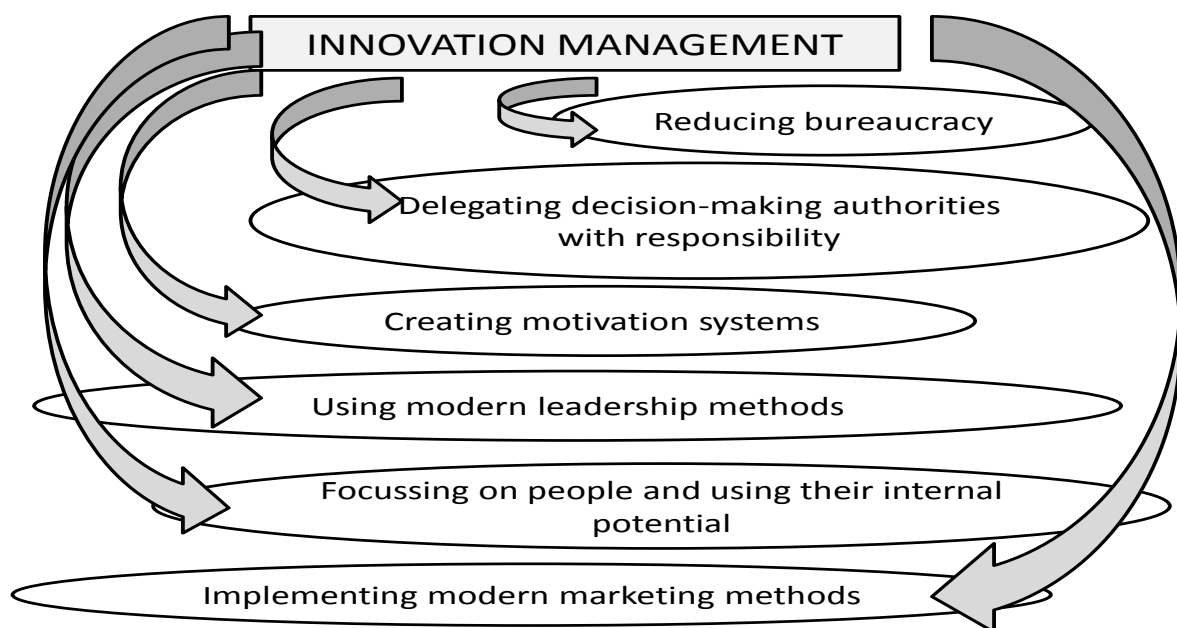

Fig. 3. Recommendations regarding non-technological innovations in Pcim community Source: own study

Having analyzed Figure 3, it can be concluded that the community of Pcim has a strong need for the implementation of innovation management. It is widely known that management plays a very important role in community development. The research confirms that no changes are occurring in that area at the moment. This brings us to the conclusion that management in the community is not effective and successful. There is a strict hierarchy and decision-making authorities are not delegated along with responsibility. The possible benefits of the introduction of changes in indicated areas are presented in Figure 4.

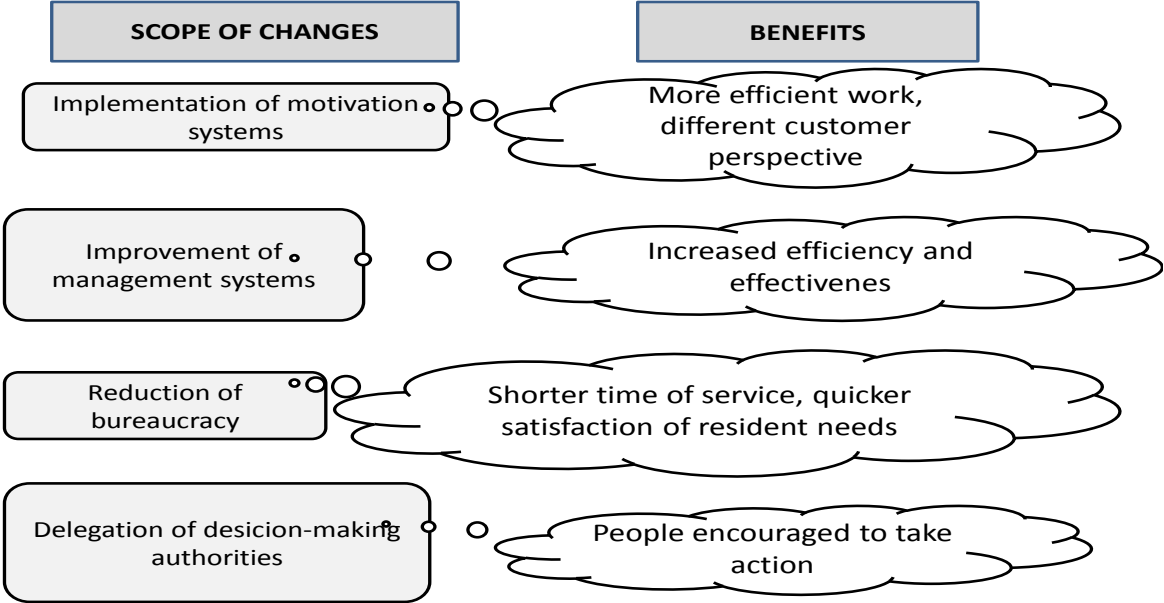| SCOPE OF CHANGES	BENEFITS
Implementation of motivation systems	More efficient work, different customer perspective
Improvement of management systems	Increased efficiency and effectivenes
Reduction of bureaucracy	Shorter time of service, quicker satisfaction of resident needs
Delegation of desicion-making authorities	People encouraged to take action

Fig. 4. Recommendations for the community of Pcim
Source: own study

Based on Figure 4, it can be concluded that the community should pay more attention to non-technological innovations, which may help it gain competitive advantage. Improvement of the management system will increase effectiveness, that is the realization of objectives.

It is also important to mention the implementation of new processes and procedures; as a result it will be possible to eliminate downtime and improve the existing process, which will consequently increase the efficiency.

The research confirms that the community is not implementing any changes in motivation and leadership systems at the moment. Nevertheless, motivating the employees, the system of recognition, introduction of a certain freedom of action leads to improved performance and the introduction of new and better governance forms offers new opportunities. Authority needs to be shared. It has to be build by consensus. Instead of

management through orders, people need to be managed through cooperation to see that they are being taken care of.

Conclusion

The paper makes an attempt at identifying the meaning of non-technological innovations and their influence on community development. Management of organizations is becoming more and more difficult; that is why the managers need to introduce changes. The technology is clearly going forward, so it needs to be kept in mind that this should be followed by social changes and innovation. Introducing innovation to a large extent is determined by the human potential, their knowledge and ability to learn.

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