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PERMANENT IMPROVING IN ENGINEERING INDUSTRY THROUGH IMPROVEMENT SUGGESTION

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ABSTRACT: Improvement suggestions present innovation tool in the management of the firm. Engagement of the workers to the achievement of the strategic goals of the company and using of their potential for achievement of such goals is also part of the improvement suggestion philosophy. Such access enables workers to think creatively and to suggest changes that can be great contribution for the company. At the same time they present value added for workers in sense of their rewarding for improvement suggestion that was realized in the practice. In the contribution we will deal with improvement suggestions and possibilities for their implementation in the practice, as well as their practical realization in the conditions of the company, evaluation of their contributions from the view of strategic, financial, economical, production, technological, environmental, and personal and the way of workers' rewarding for improvement suggestions.
KEYWORDS: improvement suggestions, innovation, working performance, human potential

INTRODUCTION

Human potential presents greatest potential of the effective and competitive company existence. Know how of the company future is concealed in human potential. Basic assumptions for using of creativity and improvement of the acting present linking of the highest number of workers to the problems solving during company processes, as well as creation of system, enabling to use thinking potential of every worker in the company, in active access of manager in improvement processes as personal example, in rapid accreditation of improvement, in motivation of all workers to the active access. [Boledovič, L. et. al, 2010, pp.5] Improvement suggestions present innovation elements in area of production management. They are tools of motivation and stimulation of workers to the increasing of value added, productivity of work, working performance and at the same time they are tools for increasing of professional growth of the company workers.

By the way of improvement suggestions also communication among workers and management of the company is improving and there is created space for applying of the workers' creativity. [Teplická, K., 2011, pp.1] Improvement suggestions are at the same time innovation tool for increasing of human potential that means workers of the company. Using of the human potential of the engineering industry should be orientated in the sense of improving, motivation, participation of workers to the activities of the company and in approach of management to workers and their know-how (Fig.1).

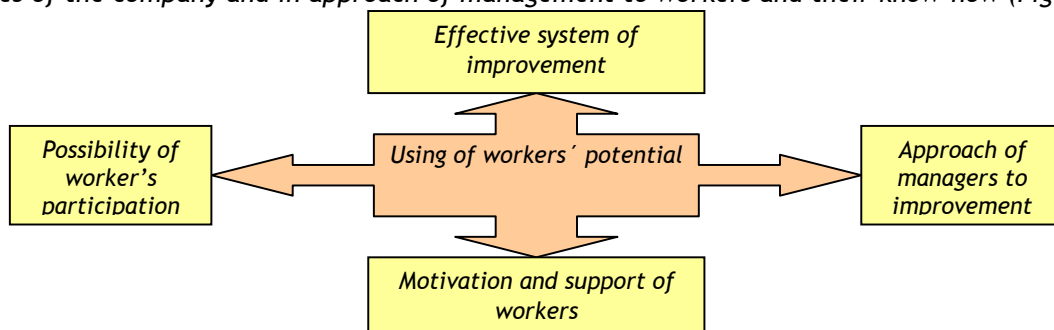


Fig. 1: Improvement in the sense of human potential increasing.

(Source: Boledovič et al., Improvement of processes, IPA Slovakia, Žilina)

Improvement suggestions present innovation element that must contribute to the achievement of the certain goals of the company to the management of human sources. Through improvement suggestions company can achieve increasing of the work productivity, work safety, quality of production, as well as time and cost saving, removing of waste, loading and other barriers in the work. Improvement suggestions present for workers possibility to be part of the company, to develop

and participate at the activities of the company, by this way they can be more useful and needy for the company. [Muchová, M., 2010, pp.25]

It is one of the form of workers' motivation that combine several positive aspects not only fellowship to the company, possibility of personal development, possibility for rewarding, but also possibility to contribute to the development and growth of the company and to deal also to its development. But improvement must be managed and systematically spotted and evaluated, at the same time results of improvement must be presented to the workers of the company through the firm's magazines or through presentation at the bulletin of the company. Basic importance of the improvement suggestions application lies in the participation of all workers of the company, in problems solving that connects with working position of concrete workers and that make his work more difficult, and in application of suggestions in short time period and their realization during several weeks, in motivation of workers to better performance and in obtaining of results in the sense of removing of waste, work simplification as well as saving and minimal costs to their evaluation. [Košturiak, J. et al., 2010, pp.46]

Firm:		Improvement suggestion			Number of improvement suggestion:	
Name and surname	Personal Number	Department	Working position	Superior		
Title of the project for improvement suggestion:						
Improvement suggestion title:						
What I want to improve?						
Method, machine, organization of work, etc.						
Why I want to improve it?						
Reasons - problem-effect, etc.						
How I want to improve it?						
Way for improving, new method, process, technology, etc.						
Schematic chart:						
Method before improvement:		Method after improvement:	Consequence - effect:			
Improvement suggestion is already realized:		YES	NO			
			Date of application		Signature of worker	
			Date of acceptance		Signature of worker	
Referee:						
Result of evaluation of the improvement suggestion:	1. Accepted improvement suggestion and its realization	2. Consideration about realization	3. Rejecting of the improvement suggestion	4. Not realized improvement suggestion		
Evaluation of improvement suggestion:	1. General bonus	2. Group rewards	3. Referee reward	4. Not measurable effect		
Date of improvement suggestion realization:						
Economical contribution of the improvement suggestion for the company:						

Fig. 2: Suggestion of improvement suggestion's form.

(Source: Teplická, K., Kaizen- účinný spôsob znižovania nákladov v podniku., 2009)

SYSTEM OF IMPROVEMENT SUGGESTIONS

Using of improvement suggestion needs system, that this system must be characterized in detail and it demands determination of conditions for improvement suggestions application, creation of forms for improvement suggestions application, filling of improvement suggestions, determination of reviewers for concrete improvement suggestion, evaluation of improvement suggestions, determination of volume for worker's reward for improvement suggestion, providing of realization of improvement suggestion, control of its realization in the practice, feedback to the workers of the company about acceptance or rejection of improvement suggestion.

Whole process of improvement suggestion application must be officially ranked to the responsible person or collective that deal with possibility of improvement suggestions realization in the practice. Whole process for improvement suggestions application is managed process and it demands documentation, elaboration of improvement suggestions and their evaluation, as well as feedback to the management of the company about possible impacts of the improvement suggestions to the economical situation of the company by the way of savings. Improvement suggestion of the company must be documented in written way and therefore there is more convenient to use unified form during their application. This form contents all demands on improvement suggestion application of worker at every working places of the engineering company (Fig. 2).

FINANCE SYSTEM OF IMPROVEMENT SUGGESTIONS

During next step there is very important to prepare description, according which improvement suggestions will be evaluated and how workers will be rewarded.

Way for workers' rewarding is determined by every company according its financial possibilities and planned capacities of applied improvement suggestions. Generally we can structure rewarding according following scale:

- Lowest bonus,
- Maximal bonus,
- Global bonus.

System of rewarding and bonus determination is very important due to the financial motivation of worker and due to the possibility to obtain financial advantage from the application of improvement suggestion. Except of fix tariff for certain categories of applied improvement suggestions also best workers can be evaluated by various prices or winnings that are enounced by employer. From the view of moral support management of the company should participate at the evaluation of its workers and to show importance of the company improvement. Such process of management to its employees declares going system of application for improvement suggestions. At the same time during rewarding and evaluation of workers there is necessary to show importance of human potential in the company, as well as contribution and total saving of the company per worker. Part of the rewarding system is also improvement of workers at the individual level. Individual improvements should reflect in the operation of improvement suggestion author in the frame of its originality, creativity and realization, which presents 30% of rewards for improvement and contributions for the company that are measurable or not measurable to 70% of rewards for improvement. [Boledovič, L., a kol., 2010, str.33]

Rewarding of workers for improvement can be evaluated also according measurable financial contributions for the company, when there is evaluated effort of author to contribute to the visible savings of the company. Nonfinancial motivation is very important part of the process for improvement suggestions' applying mainly for company employees that are participating at the process of management and development of the company. At the same time they have possibility to develop their knowledge, skills, and abilities and to present themselves as a personality - human potential of the company. After rewarding of workers evaluation of improvement suggestions in the company presents important part of whole process, as well as monitoring of paid off rewards and savings in the company, and evaluation of total personal, technical, economical, technological contributions for the company. Statistical evaluation of improvement suggestions is no separable part of sources planning for future period due to the realization of improvement suggestions, as well as planning of number of improvement suggestions in the company.

ANALYSE OF PROJECT IN THE FIRM

Statistical evaluation of the process for improvement suggestions' applying had been realized in concrete engineering firm and we found out that number of improvement suggestions is averagely around level 570 improvement suggestions during 2003-2011 per year. Volume of rewards, paid off for improvement suggestions during following period 2003-2011 presents 3 791 € per year (Fig. 3). Number of applied improvement suggestions in the company is high and employees of the company are sufficiently motivated to apply for improvement suggestions that contribute to the improvement of their working conditions.

Economical contributions from the applied and realized improvement suggestions present important part of the improvement suggestions evaluation. We compared number of suggestions in 2004 and 2010 as well as economical contributions from the applied and realized improvement suggestions in concrete company. In spite of low number of applied improvement suggestions in 2004, in the company there is still existing potential of workers that apply for improvement suggestions and they are trying to contribute to the economical contribution for the company, which presented in analyzed period saving 30 000 - 50 000 €. Through know-how of the workers company saved financial sources for technologies and changes in the production process.

Importance of improvement suggestions is not separable part of the system for career's management in the company. According applied improvement suggestions workers can graduate in their Professional growth and career. According improvement suggestions the company can monitor talents of its workers. [Hitka, M. 2011, str.40] Evaluation of the contribution from improvement suggestions in the practice is at the same time part of human resources controlling - controlling of management of human sources as part of the quantitative indexes that express value added of work.

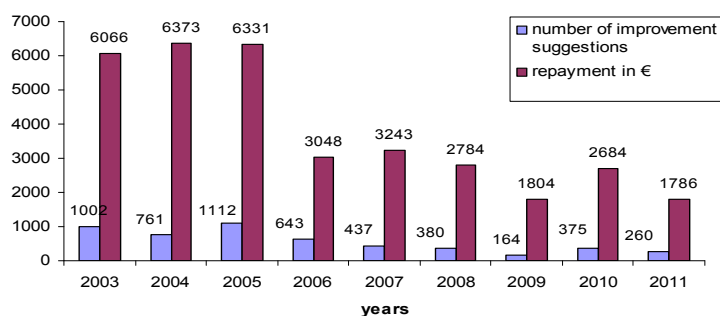


Fig. 3: Number of applied improvement suggestions and volume of rewards for applied improvement suggestions. (Source: Muchová Martina, Kaizen neustále zlepšovanie výrobného procesu, 2010)

Study of human resources HR controlling 2005 considers care about employees, their motivation and satisfaction in the company as a most important priority of the human sources department. [Zámečník, R., 2011, str. 146] Improvement in the company can be realized also according created movements, as for example quality group in Japan, improvement movements, movements of human relationships, etc. mainly creation of conditions for employees' meeting with aim to improve everything in the company if it is possible, presents important task of the company. Mainly employees are important competitive advantage, since they produce ideas, which can bring the company high savings. Example of mentioned can be various Slovakian companies that saved on the improvement suggestions of their employees millions Eur. For example Volkswagen company, in which employees apply for improvement suggestions, in 2010 they applied for 2 308 improvement suggestions and by this way company saved 6 millions Eur (Kováčik, M., 2010)

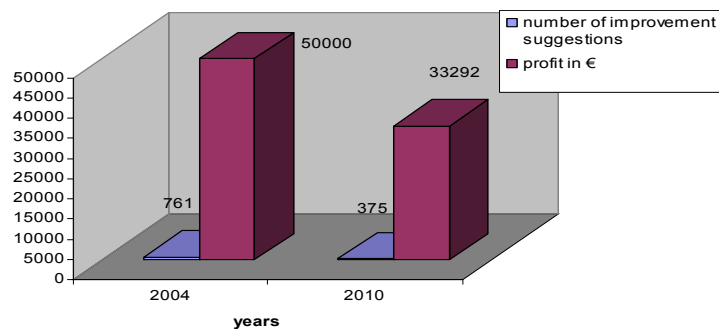


Fig. 4: Comparison of improvement suggestion number and economical savings. (Source: Muchová Martina, Kaizen neustále zlepšovanie výrobného procesu, 2010)

System of improvement is orientated to the individual improvement or team improvement, to the management of ideas, workshops, etc. Improvement is mostly orientated to the improving of working conditions of employees, to the increasing of the safety and protection of health during the work, to the energetic savings, but many times there are also improvement suggestions in production processes, connected with technologies, adjusting, etc. [3,11] System for improvement suggestions application is managed process and therefore there is necessary to make documentation and methodological manual to the management of improvement suggestions.

CONCLUSIONS

Motivation of workers presents necessary demand in area of human potential using. Organizations must sufficiently use human potential, which is „at hand“, failing which they will need to give improvement to the external organizations and they will need to pay for provided services high prices. Mainly employees of the company are potential that can bring improvements and considerable savings that are necessary for operating from the view of economical management in period of economical recession. Abilities of workers in the company are considered as less used source of human potential and according experts there is used only 10-20% of intellectual capital. In case companies want to develop and grow, they must make changes and improvements. Without process of continual improvement they will not be able to increase their efficiency and to stay on the market with competitive environment. Mainly improvement suggestions present tool how to use human potential of the company sufficiently and how to use totally knowledge, skills, and abilities of their workers due to the company development. Workers present key to success, development of the company and future belongs to using of their potential.

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