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# A PROCESS ASSESSMENT OF IMPROVING WORK SAFETY IN THE ASPECT OF PROACTIVE APPROACH IMPLEMENTATION

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**Purpose:** The aim of this paper is to conduct a discussion on the relationship between the proactive approach of employees and the elements of the system for improving occupational safety.

**Design/methodology/approach**: In this article, the author presents the importance and impact of an employee's proactive attitude in improving workplace safety.

**Findings:** The paper describes the impact of standardization and process approaches on occupational safety management, as well as the importance of a proactive attitude in improving occupational safety. Based on the results of the study and its analysis, the following conclusions can be made: efficiently functioning work safety management system positively influences over general work safety and hygiene status of a company; employee involvement treated as a proactive approach in a safety system creation from the level of being familiarised with own relation in the context of the entire organization is a roadmap to creating mutual responsibility for overall safety; a proactive strategy should be the foundation of modern work safety management in the organization.

**Originality/value:** The author of this publication analyzes the scientific literature and current research of his own in evaluating the process of improving occupational safety in terms of the implementation of a proactive attitude, focusing on the key areas of the subject of research, which consist of a proactive attitude, elements of the system of improving occupational safety, and the impact of standardization and process approach on occupational safety management. **Keywords:** work safety development, processing approach, proactive approach.

Category of the paper: Research paper.

## 1. Introduction

Companies are constantly struggling with finding exact solutions whose aim will be improvement of functioning particular fields. The goal they have is to increase their effectiveness and reduce own expenses. Modern companies apply a systemic attitude to improving processes, work safety and hygiene management included (Gajdzik, 2010). One of organization's feature as a system is a capability to develop itself. Such a company's approach to management lets increase its performance, organizational extent and technological, organizational and social innovation implementation. In turn, to ensure an efficient management in the scope of work safety and employee health, improving actions are crucial. (Zieja, Gołda, 2014; Yazdi et al., 2020). To make the company be managed in a proper and efficient manner in the safety area, it is essential to have a regular control and assessment of widely perceived hazards (Alli, 2017). Employee safety management efficiency assessment requires not only monitoring implemented and conducted actions realization, but their assessment in terms of accepted goals concerning safety in the organization (Couto da Silva, Amaral, 2019). When analyzing and evaluating the safety management area, it is important to consider the HSE management system measures taken, their results, and the occupational risk assessment (Zio, 2018; Fatih et al., 2022).

Systemic approach to safety management and hygienic work establishes one of steps of a developmental attitude to the problem of work safety. According to the authors of the literature (Ben Eli, 2018; Liu, 2019), the management of this area should be characterized by a systems approach in its management and proactive measures. The goal of a safety management system should be to help an organization control and minimize health hazards to workers in their environment (Li, Guldenmund, 2018). Moreover, a safe workplace management in a company is based on the foundation that risk-free employee behavior and work conditions are not created intrinsically, but those are their result of an earlier compiled and implemented agenda. Hence it is taken into consideration that a proactive approach plays an important role (individually and as the whole company) in an efficient safety management in the organization.

The reason why this article has appeared is to conduct a discussion on the relationship between the proactive approach of employees and the elements of the system for improving occupational safety. To accomplish the aim, the author applied an individual in-depth interview method which was conducted on a group of 78 Occupational Health and Safety (OHS) service employees in different production companies in Poland. Obtained results were analysed and findings were used to further research on a proactive approach.

#### 2. Subject literature overview

Providing employees with safe work conditions is an elementary responsibility for an employer and one of the most important elements in a modern management of a company (Lis, Małysa, 2021). Moreover, work safety has an impact on companies' outcomes (Odzimek, 2019), and at the same time it is a legislative and social duty. Changes which happen in companies are dynamic, and simultaneously, they tend to be potentially more hazardous. Work safety in the literature is defined as an activity which intends to secure an employee in case of accidents, eventually hazards, at work (Hansen et al., 1998) and diseases, especially profession-related diseases (Hanke, Szeszenia-Dąbrowska, Szymczak, 2002). The activity that relates to work safety is realized by applying various organizational and technical means, and, as well, shaping safe human behaviors at workplace (Górny, 2017). Each of above-mentioned activities should specify a type and intensification of potential hazards that may happen.

The primary goal of occupational safety management is to improve working conditions and human health in the workplace, as well as to prevent the emergence and presence of in the work environment of factors that may cause danger (Battaglia, Passetti, Frey, 2015). L.F. Korzeniowski (2012) deems that safety management is understood as minimization or elimination of danger through deliberate, regulative human actions. According to few approaches it is emphasized that safety management refers to life-related dangers and individual or group hazards including risk management. However, M.B. Weinstein (1997) indicates another approach to the management of work safety and employee health in the organization. In one of his publications, one differentiates four levels of safety and work hygiene management (Table 1) in terms of individual organization's attitude to work safety and employee's health protection.

#### Table 1.

Level	"To do" motivation	Types of actions	Achieved results in the OHS field	
Ι	Anxiety	Dassina	Not full compatibility, results worse	
		rassive	than average	
Π	Punishment	Panativa	According to the law, no	
		Reactive	improvement, average result	
III	Prize	Active (understanding and trust)	Correct behaviour, results better than	
		Active (understanding and trust)	average	
IV	Intrinsic motivation	Productive (reasion and involvement)	Constant improvement, leadership,	
		Froactive (passion and involvement)	brilliant results	

Levels of safety and work hygiene management in a company

Source: own compilation based on: Weinstein, 1997.

Work safety management related to first (I) and second (II) level refers to a traditional or reactive approach, but an approach related to III and IV level is treated as a systemic and proactive. Two last levels are related with implementing a particular system of resource management, actions and processes directed to a constant improvement of work safety and employee health protection.

Currently, in forming an approach to work safety management there are two basic types (Chomątowska, 2011; Pawłowska, Pęciłło, 2018):

 traditional approach – up to the mid-1990s 20th century, it was mainly based on taking up necessary actions to fulfill legislative requirements concerning work safety and hygiene, correlated with reactive actions, - systemic approach to work safety and hygiene - since the mid-1990, 20th century; actions are based on building a work safety and employee's health management system which is integrated with a general management system of a company; supported with proactive actions.

Many standards (documents) concerning various aspects of management in the scope of quality, environment, work safety in a company commonly function (Ejdys, Kobylińska, Lulewicz-Sas, 2012; Łańcucki, 2016). It is spread that those ones are defined as standardized management systems (Borys, Rogala, 2012; Łańcucki, 2019). Standardized management systems are one of tools which may be used in the management process in the organization, including safety and employee health. According to research, adjustment of work safety management systems to requirements based on norms concerning those systems influences on improving processes of safety and work hygiene management and obtained results in that field (Pawłowska, 2009; Podgórski, 2010).

Standardization is one of elementary rules of Lean manufacturing<sup>1</sup>. Thanks to it, there is an easier observation of processes that can be measured, show divergence and reveal problems. Standardization used as a work organization method enabling to implement developmental changes, is a dynamic process. Standardization makes sense only on a balance of constant development and as a tool for building stability (Wang, 2011). It is based on implementing unitary work standards which constitute a reference point for all processes in a company. Standardization means fluctuations in terms of efficiency level, but also other crucial fields for a company. Such a situation may change itself depending on a workday, changes in a work organization or an individual employee.

A long-anticipated standard, and the first normalized, is an implemented ISO 45001:2018 norm from March 2018. This standard was compiled with the support of International Work Organization and domestic requirements. It contains guidelines how to apply it, which enables the organization to improve results in the scope of work safety. ISO 45001:2018 can be used in every organization irrespectively how big, which type and characteristics it is. The norm has a similar structure with earlier published norms concerning, among others, quality management system and environment management system. Integration between a safety and work hygiene management system and an organization management system becomes easier. The basic rule how ISO 45001:2018 works is a PDCA cycle. The norm aim is supporting and promoting good practical solutions and standards in the field of work safety keeping a balance with economical needs.

<sup>&</sup>lt;sup>1</sup> Lean manufacturing, lean production is a concept of production process management which developed based on rules and tools of Toyota production system (TPS) (Liker, 2005; Marchwiński, Shook, Schroeder, 2010).

#### 3. Processing approach in work safety management

To improve functioning modern companies, it is essential to conduct it based on rules and business processes management culture (Lis, Ptak, 2022). As J. Górna and others (Górna, Kaźmierczak, Zapłata, 2021), emphasize that the management in the organization, independently from a business profile, is integrated with a process. A processing management, on one hand, is based on classical solutions and authorized methods, and, on the other hand, it applies new tools and solutions. (Bitkowska, 2021). Consequently, it leads to higher possibilities of how a company functioning is improved through information transfer enhancement, increasing performed actions quality and a work safety level.

S. Stabryła (2010) in one of publications emphasizes that processing approach is not anything new, and its genesis connects with a classical approach of systemic and empirical management school. However, A. Bitkowska (2019) deems that further steps of development based on its understanding and process organizing. Then, processing approach, processing management through dynamic processing management, leading to integrated processing system (Figure 1).



**Figure 1.** Phases of processing management development. Source: own compilation based on: Bitkowska, 2019.

In the processing management evolution, there was a foundation that an organization structure is created by many, closely related processes that are interpreted as basic dynamic subsystems of the organization (Bitkowska, Weiss, 2015). It is indicated that complex quality management (TQM), which is the core of orientation towards processes. Specification and guidelines of the above orientation were mentioned in international 9001 ISO. Requirements for the quality management system based on processing approach were mentioned there. Apart from TQM, there are other ways of quality management which refer to processing approach - six sigma and lean management. Their common goal is to develop the organization directly by enhancing operational processes aimed at product quality and waste curbing (Rogala, Bartniczak, 2018).

In the field of safety management, a process in the sense of ISO 45001:2018, is an organizational process or a management process. This process can encompass, by its range, every sequence of actions which are performed in the company. It includes both actions with material products processing (production processes) and not directly correlated ones with making products or services - non-production processes (Pawłowska, Pęciłło, 2018). Authors (Bugdol, Szczepańska, 2016; Jelonek, 2022; Lis, Ptak, 2022) consistently emphasize that processing approach implementation is multi-phase like developmental processes in the

organization and it is continuous. Benefits coming from actions directed to achieving higher and higher levels of processing maturity are spotted both from internal stakeholders' perspective and external ones (Jelonek, 2022).

Delving into the organization through the lens of conducted processes and mutual connections and interactions, and not from the perspective of organization structure, establishes the core of processing management. Processing approach implementation in the field of OHS management should result in (Pęciłło-Pacek, Galwas-Grześkiewicz, 2022):

- better understanding among all employees and individuals who cooperate with the organization how work safety and hygiene management system functions,
- decreasing functional and hierarchical barriers, including communication and cooperation improvement in the scope of work safety and hygiene,
- employee involvement increases to correct safety and health at work.

In a management of processes, it is very fundamental to establish responsibility for particular processes conduct and carrying out featured phases of processing management. This is a guaranty how to achieve established goals of the organization. Moreover, exact recognition and understanding particular processes lets them improve and constantly develop in the organization. Efficiency of a functioning company and a customer satisfaction get increased.

## 4. Proactive approach in work safety development

Modern attitude to work safety and employee health management should characterize a systemic approach in its management and proactive actions (Kubasiński, 2022). A crucial role in promoting and implementing work safety management systems plays ISO 45001:2018, which includes requirements, guidelines concerning how it is applied to make the organization proactive improvement of results in terms of OHS. Involvement and a role of individuals not having executive positions, according to ISO 45001:2018, are considered to be an elementary condition of effective work safety management system in a company functioning. In view of this, employee engagement is something that management should constantly work on and take care of (Sonnentag, 2003; Devi, 2009).

A proactive approach results from the accepted safety strategy in the organization. Proactive organization is the organization which puts emphasis on long-term strategic planning. Organizations whose aim is to be proactive gain vast benefits, both business ones and in terms of coping with potential problems in the field of work safety. A strategic attitude to work safety management is not only correlated with a company adjustment to requirements that are set by legislative regulations and normative acts. According to the researchers (Woźny, Dobosz, Saja,

2018), such an approach is a kind of management philosophy on the basis of directed actions are conducted to achieve accurately thoughtful goals based on safety.

Proactivity may be considered on an individual, team and organizational level (Parker, Williams, Turner, 2006). In a proactive approach, on a par with a proactive strategy of an organization, a special role plays an employee. A. Adamik and M. Matejun (2012, p. 48) pay attention to "(…) in every approach to the organization, the most important factor is a human factor, without people organizations would not exist at all people create them".

A. Bańka (2015) deems that proactivity is a conscious beginning of the action without particular intention achieving potential goal at given moment. Proactive approach may be understood as both open sharing with your ideas, engaging in a position development, and implementation of innovative changes in the field of the whole venture (Ślebarska, 2017). According to M. Crant and S. Bateman (2000), what characterizes people with a high level of proactive attitude is their ability to see and seize opportunities that come their way, as well as to take initiative and strive to change the environment in which they find themselves. Proactive approach is characterized by specific involvement in particular actions which every individual is responsible for and striving for implementing positive changes which every individual is responsible for as well (Paliwal, 2018; Peñaflor, Juevesa, 2021).

Modern companies need involved, proactive employees for its development who will identify themselves with it and treat it as their own (Anitha, 2014; Sasin, 2018). Individuals with proactive attributes are valueable resource for the organization. They initiate changes in a company, predict some events in the environment they function every day and even offer solutions. Therefore, an important element in shaping the proactive attribute of employees in an organization is their motivation. According to R.W. Griffin (2005), motivation is a set of forces that cause people to behave in a certain way. In turn, J. Sadowska-Wrzesińska and Ż. Nejman (2016) state that motivation significantly influences attitudes and behavior among employees through the use of specific, correctly identified and selected incentives.

## 5. Methodology

The interview was addressed to the OHS service employees of production companies (various branches) in Poland. To carry out the survey an in-depth interview (IDI<sup>2</sup>) method was used. Research was carried out among 78 individuals from June 2020 to March 2023. If a company employed more than one OHS specialist, the interview was carried out with only one specialist. In such a case, a person was selected in a randomized way. The basic goal for

<sup>&</sup>lt;sup>2</sup> IDI - Individual In-depth Interview, in comparison with focus interviews (FGI - Focus Group Interview), are reduced to a direct conversation between an interviewer and an interviewee. In such an interview there are no third party.

the interview was gaining necessary information to assess efficiency of actions that improve work safety and identify proactive indicators. The structure of interviewees was presented in Table 2.

#### Table 2.

Respondent's features in the interview

		Company				
Charae	Distribution		Total			
		N	%	Ν	%	
	Small	21	27	21	27	
Company size	Medium	45	58	45	58	
	Large	12	15	12	15	
	Processing	56	72	56	72	
Characteristics of	Machining	12	15	12	15	
a company	Assembly	7	9	7	9	
	Others	3	4	3	4	
Intervieweele	Operational level	12	16	12	16	
interviewee's	Tactical level	59	75	59	75	
response	Strategic level	7	9	7	9	

Source: own compilation.

Significant majority gained results come from processing companies and it was 72% of all companies in the research (Figure 2).



## Characteristics of a company

Processing company Achining company Assembly company Others

**Figure 2.** Percentage distribution of companies participating in the research by nature of activity. Source: own compilation.

An interview questionnaire was designed by an author and consisted of 7 fundamental questions (deliberately selected and set in a specific order). Interviewees (OHS service employees) were answering the following questions:

- 1. Which extent of planned effort into investment as part of actions improving work safety was realized?
- 2. Which extent of participation in realization of implemented improving actions did employees have?
- 3. What are the dynamics of employee reporting concerning improving actions?
- 4. What is the number of reported improving actions in terms of particular periods?
- 5. Was feedback about conducted improving actions provided to employees?
- 6. Are implemented improving actions modified with an active participation of a notifier?
- 7. Have conducted improving actions brought expected results?

Moreover, in a questionnaire there were two questions which are short respondent's particulars. Questions were about the characteristics of a company, an interviewee's work position and the identification which level of a company hierarchy an employee represents. Question content and obtained results were presented in Table 3, chapter: Results and discussion.

## 6. Results and discussion

In a Table 3 there is a specific characteristic of findings (answers to the questions) in terms of conducted research.

## Table 3.

Characteristics of finding	s (answers to the questions)
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Question	<b>Response distribution</b>			
Question	Answers	Ν	%	
1 Which extent of planned effort into investment as part of	Little	20	25,6	
1. which extent of planned effort into investment as part of actions improving work sofety was realized?	Medium	31	39,7	
actions improving work safety was realized?	Huge	27	34,6	
2 Which extent of participation in realization of implemented	Little	14	17,9	
2. When extent of participation in realization of implemented	Medium	33	42,3	
improving actions did employees have:	Huge	31	39,7	
3 What is the dynamics of amployee reporting concerning	Decreasing	8	10,3	
5. what is the dynamics of employee reporting concerning	Constant	44	56,4	
improving actions:	Increasing	26	33,3	
4 What is the number of reported improving actions in terms	Decreasing	12	15,4	
4. what is the number of reported improving actions in terms	Constant	35	44,9	
of particular periods:	Increasing	27	34,6	
5.Was a feedback about conducted improving actions	Yes	71	92,2	
provided to employees?	No	7	7,8	
6.Are implemented improving actions modified with an	Yes	44	56,4	
active participation of a notifier?	No	34	43,6	
7 Have conducted improving actions brought expected	No gains	5	6,4	
results?	Little gain	23	29,5	
	Noticeable gains	50	64,1	

Source: own compilation.

Question 1: Which extent of planned effort into investment as part of actions improving work safety was realized?

The first question was about the realization extent of efforts which were accepted in a company in terms of improving actions. 40% of interviewees answered that effort realization is on a medium level, and 35% of interviewees said that it is on a high level. On the basis of these responses, it is confirmed that management in particular companies have a proper attitude to shaping work safety conditions. Doubtlessly, such a situation leads to a higher interest in safety from employees and their personal involvement, for example, notifying improving actions proposals.

# Question 2: Which extent of participation in realization of implemented improving actions did employees have?

A question was about the employee participation extent in conducted improving actions in a company. According to obtained answers, it is confirmed that participation extent is medium or huge and it is 42,3% and 39,7%. Only in 17 cases the participation level was little. It is emphasized that low-level employee participation in a realization of implemented improving actions is one of the motivational factors to personal involvement in safety conditions improvement. It is put emphasis on that if employee participation in improving action realization is high or medium, it results in action effectiveness. In turn, if the employed participation is low, safety management is on a low lever as well, for example, it encompasses only reactive actions.

Question 3: *What is the dynamics of employee reporting concerning improving actions?* A question was about dynamics of employee reporting in the field of improving actions, which were accepted in a company. 56,4% of interviewees said that in their company's employee reporting is constant, and in every third - increasing. This result depicts many contributing factors, but the reason why it happens is correlated with internal employee programs "active employee" integrated with a rewarding system. It should be emphasized that with exact work safety management, reporting dynamics should be increasing.

# Question 4: What is the number of reported improving actions in terms of particular periods?

Next question in a questionnaire was about shaping the number of improving actions in terms of particular periods. In this question, periods were not specified. Every company has its own reporting system. It is important that every company has reliable information-decision system which supports making decisions. 44,9% interviewees confirmed that the number of notified improving actions is constant, and 34,6% said - increasing. Obtained results are correlated with answers in a previous question (reporting dynamics) which may suggest that in particular companies a well-developed and obeyed motivational system and tools enhancing engagement result in the number and dynamics of notifications.

Question 5: *Was a feedback about conducted improving actions provided to employees?* A question was about providing employees with feedback concerning conducted improving actions by a company. The possible answers were "yes" or "no". 90% interviewees said that feedback is provided. The result means that feedback is a key element in a work safety management, and the issue of employee safety is important for a company.

Question 6: Are implemented improving actions modified with an active participation of a notifier?

The sixth question was about active employee participation reporting non-compliances as part implemented actions in a company. 56,4% interviewees said "yes", and 43,6% interviewees said "no". It is emphasised that making an employee participate in particular phases of conducted improving actions realization is a motivational factor to personal involvement in improving safety conditions. It is noticeable when there is increased frequency of signaled non-compliences being at work or willing to share ideas in terms of problem solutions.

Question 7: Have conducted improving actions brought expected results?

The last question was about expected results in the scope of conducted improving actions. Over 60% interviewees indicated that conducted actions brought expected results. About 10% interviewees said that they did not bring any. In every third company 29,5% conducted actions brought expected results to a minor extent. These answers may be caused by many factors. Interviewees answering this question paid attention to the economic situation, incuring costs for accepted solutions and transferring funds concerning safety into current investment realization.

### 7. Results and discussion

The purpose of the article was to discuss the relationship between the proactive attitude of employees and the elements of the occupational safety improvement system. To achieve the goal, an author applied individual in-depth interview method, which was carried out on a group of 78 OHS service employees. The aim of a conducted interview was obtaining necessary information to assess efficiency of improving actions in the aspect of proactive approach implementation. On the basis of obtained results, the following conclusion can be reached:

- Work safety management system is a part of general company management system. Its task is to assist the organization control and minimize dangers for health employee and others as well.
- 2. Efficiently functioning work safety management system positively influences over general work safety and hygiene status of a company. Chanllenges and requirements which result from foundations included in 45001 ISO and let the organization comply

with not only legislative regulations achieving safety goals, but mostly enable and facilitate constant results improvement in the scope of work safety and employee health.

- 3. Employee involvement treated as a proactive approach in a safety system creation from the level of being familiarized with own relation in the context of the entire organization is a roadmap to creating mutual responsibility for overall safety.
- 4. A proactive strategy should be the foundation of modern work safety management in the organization (The essense is a constant development).

Moreover, obtained data and information in research constitute significant knowledgerelated resource and may be used for further research in the field of efficiency assessment of proactive actions in a systemic work safety management, in particular on:

- the area on employee involvement and motivation, that is, further exploration of the area on the study of the drivers of an employee's proactive attitude and the relationship between taking action of proactive attitude and the evaluation of the effectiveness of the improvement measures taken in companies in various industries,
- analysis of the area of communication and information flow and an attempt to answer the question: Does the system of communication and information flow adopted in the company constitute one of the key factors in the work environment, building conditions for the formation of a proactive attitude of the employee?

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