

MANAGEMENT IN THE OCCUPATIONAL SAFETY AND HEALTH SYSTEM

Violeta Đorđević¹, Jovan Gordić², Boro Krstić³

Abstract

Management within the occupational safety and health (OSH) system is based on a structured approach to planning, directing and controlling processes to preserve employees' health and safety. This process occurs under specific working conditions and requires continuous adaptation to social, technological, and legislative changes. Management activities involve risk analysis, hazard assessment, and implementing preventive measures by applicable laws and standards. A key role is played by various stakeholders – from institutions and organizations to individuals – whose interaction significantly contributes to the system's overall effectiveness. Of particular importance is the influence of the individual within the OSH system. Every employee, through their behavior, awareness, and sense of responsibility, can directly impact the safety of their colleagues. This influence operates on multiple levels: toward an individual (e.g., mentoring or hazard alerting), within a group (through teamwork and the sharing of best practices) and at the organizational level (by establishing a safety culture within the workplace). In doing so, individual actions contribute not only to personal protection but also to the reinforcement of the broader OSH system. The focus of this paper is to explore the significance of management in the field of occupational safety and health, as well as its impact on the reduction of occupational risks and the improvement of working conditions. The research findings contribute to a deeper understanding of management practices that support a sustainable and resilient employee protection system.

Key words: *Safety management, governance, person (individual), safety culture.*

Introduction

Management is a complex process encompassing the planning, organization, leadership and control of resources to achieve defined goals within an organization. According to Pušić (1973), management is defined as a dynamic set of activities that enables the optimal functioning of organizational systems through effective decision-making and the coordination of human and material resources. Within the context of occupational safety and health (OSH) systems, management plays a pivotal role in safeguarding employee health and preventing workplace risks.

Lukić (1977) emphasizes that every social reality must be observed through a comprehensive framework that includes subjects, objectives, methods and the consequences of actions. This holistic approach is equally applicable in the field of occupational safety, where management decisions are directly linked to hazard identification, the implementation of preventive

1 Violeta Đorđević, doctoral student, independent expert advisor in the Ministry of Protection environment, Belgrade, E-mail: violeta.veselinovic1404@gmail.com

2 Jovan Gordić, doctoral student, *Faculty of Law in Niš*, E-mail: gordicjovan@gmail.com

3 Boro Krstić, Associate professor, Bijeljina University, **Faculty of Agriculture**, Bijeljina, E-mail: direktor@ubn.rs.ba

measures and the assurance of safe working conditions. Effective management in this area demands consistent adherence to normative and technical regulations, as well as the continuous assessment of the working environment.

The individual, as the central actor in any organizational system, plays a crucial role in carrying out managerial activities. Their capacity for perception, analysis and decision-making enables the adaptation of processes to the specific demands of the workplace. Lukić (1977) further highlights that there is no knowledge without experience, underscoring the importance of professional practice and institutional knowledge in building an effective safety and health system.

Gordić (2011) points to the importance of a scientific approach in understanding and improving safety systems, particularly through the lens of the complexity inherent in interpersonal and organizational relationships. The management of occupational safety and health must not be a static process it requires continuous assessment, employee education and the application of modern techniques to minimize occupational risks and ensure a sustainable working environment.

A significant segment of OSH management lies in the individual's influence on other actors within the organization. At the micro level, the individual influences one-on-one interactions through direct communication, risk warnings and serving as an example of personal responsibility. At the meso level, the individual affects the group, shaping attitudes and behaviors through team dynamics, knowledge sharing and informal leadership roles. At the macro level, the individual influences the collective—by fostering a culture of safety, initiating change and supporting integrated management systems, as confirmed by contemporary research on the importance of the human factor in safety culture (Geller, 2021; ISO, 2018; Jovanović & Petrović, 2022).

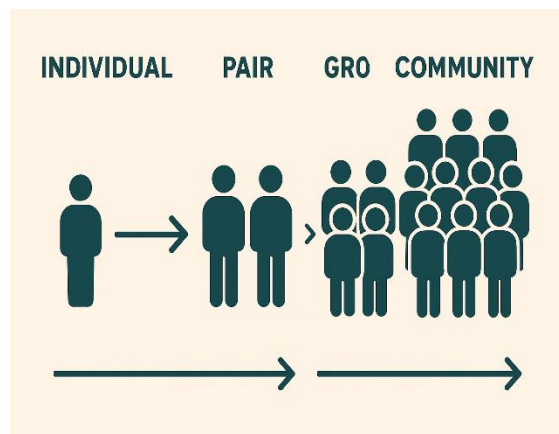


Figure 1. The Individual's Influence on Occupational Safety and Health within the Collective

Figure 1 illustrates these layers of human influence starting from the individual's impact on two people, then on a group and ultimately on the entire collective. This hierarchical structure demonstrates how an individual's behavior and decisions can multiply and resonate throughout the organization, positioning the human factor as not only the most sensitive but also the most critical element within occupational safety and health (OSH) management systems.

An effective OSH management system must be designed to reflect the dynamic nature of human behavior, while simultaneously adhering to all relevant regulations, organizational requirements and technical-technological innovations. Such an approach enables the creation of optimal conditions for employee protection, enhances work efficiency and contributes to achieving a high level of organizational resilience.

This paper examines both the theoretical foundations and practical aspects of management within the OSH system, with particular emphasis on the role of managerial structures and individuals in safeguarding employee health and safety.

What is Management?

Management is a fundamental process within organizational and social systems that enables effective planning, decision-making, and coordination of resources to achieve defined goals. As an interdisciplinary field, management encompasses economic, technical, organizational and social dimensions that contribute to the optimal functioning of complex systems. Its application in occupational safety and health (OSH) management is particularly important, as it establishes effective mechanisms for employee protection and risk prevention in the workplace.

According to Pušić (1973), management is a system of activities through which the work of people and resources is organized and directed in line with predetermined objectives. He emphasizes that management is a process that involves decision-making, resource allocation and control of implemented activities, making it a foundational factor of organizational efficiency. In the context of occupational safety and health, this approach materializes through continuous risk monitoring and the organization of preventive actions to ensure employee safety.

Jovanović (2010) defines management as the coordinated application of knowledge, skills and tools in the pursuit of achieving organizational and project success. Effective management requires an understanding of the organizational framework, employee motivation and the external environment in which the organization operates factors that are crucial to the establishment of an effective OSH system.

Radomir Lukić provides a theoretical framework for understanding the scientific foundations of management, asserting that science represents the objective reproduction of natural, social and cognitive processes. According to him, knowledge is inseparable from experience and the ability to process and analyze data enables more accurate decision-making. This perspective is especially relevant in OSH management, where decisions must be based on data analysis, risk assessment and the effective implementation of protective measures.

Henri Fayol (1949) was one of the first authors to define the core functions of management: planning, organizing, leading and controlling. His management model remains a cornerstone in understanding managerial processes within modern organizations, including those related to workplace safety. Fayol's approach highlights the importance of each contributing factor in achieving organizational stability and success.

Peter Drucker (1954) emphasizes that management is a process grounded in informed decision-making and that the success of management is measured by a leader's ability to guide the organization toward long-term sustainability and growth. In the field of

occupational safety, this concept is reflected through strategies that sustainably reduce risks, improve working conditions and increase employee safety over time.

Lukić also stresses that law is a powerful instrument of policy, frequently debated within the social sciences. In this context, occupational safety management also involves legal dimensions regulations, laws and standards essential for protecting employees and ensuring a safe working environment.

The role of the individual within organizational systems must also be emphasized. An individual directly influences two colleagues through interpersonal communication, knowledge sharing and daily actions that shape others' behaviors. At the group level, the individual acts as a bearer of attitudes, an informal leader, or the initiator of safety initiatives, thereby influencing team culture and collective responsibility. At the collective level, the individual contributes to shaping the organization's safety culture whether through formal roles (e.g., OSH representative) or informal activities that promote awareness of workplace safety. Research shows that individual behavior has a cumulative effect on collective safety and that a well-developed safety culture begins with personal responsibility and example (Geller, 2021; Reason, 2020; Jovanović & Petrović, 2022).

Management, therefore, is a dynamic and multidisciplinary process that requires continuous adaptation to environmental changes. Its successful application depends on the manager's ability to balance strategic and operational priorities, using both theoretical frameworks and empirical knowledge to improve occupational safety and health systems.

Table 1. Comparative Analysis of Traditional and Contemporary OSH Management Models

Aspect of OSH Management	Traditional Model	Contemporary Model
Management Focus	Reactive – responding to incidents	Proactive – prevention and systematic risk assessment (Reason, 2020)
Management Functions	Limited to planning and control	Integration of all functions: planning, organizing, leading, and controlling (Fayol, 1949; Drucker, 1954)
Role of the Individual	Individual as a procedural executor	Individual as a bearer of safety culture and initiator of change (Geller, 2021; Jovanović & Petrović, 2022)
Role of Management	Hierarchical control	Participatory leadership and employee engagement
Safety Culture	Low awareness, focused on formal procedures	High awareness, continuous education, open communication and collaboration
Legal Framework	Law and standards applied as the final objective	Legal framework as a foundation for strategic development and organizational accountability (Lukić, 1977)
Approach to Risk	Passive risk tolerance	Active risk identification, analysis, and mitigation
Role of Teams and Collective	Group responsibility without clear coordination	Team synergy with clearly defined roles and feedback mechanisms
Use of Technology and Tools	Limited use (e.g., paper-based documentation)	Digitization of processes, risk management software, IoT sensors, etc.
Employee Motivation for OSH	Punitive approach (response to rule violations)	Motivational approach through training, recognition, and involvement in decision-making processes

This table provides a clear overview of the evolution of approaches to occupational safety and health (OSH) management, as well as the role of the individual and their influence on others, the group and the organization as a whole. As previously emphasized, the individual represents the central entity within the organizational system, whose ability to impact others (dyads, groups and the broader collective) contributes significantly to strengthening safety culture and promoting proactive risk management (Geller, 2021).

Furthermore, the theoretical foundations laid by Pušić, Fayol, and Drucker align clearly with the contemporary model, whereas the traditional model is more closely associated with reactive, strictly hierarchical approaches that neglect the importance of knowledge, motivation and digital transformation. This analysis confirms that effective OSH management today requires the integration of legal, organizational and human factors, supported by modern concepts of participation, digitalization and continuous learning.

Management and the Human Factor in Occupational Safety and Health Systems

The question of the individual and their role within occupational safety and health (OSH) management systems is essential for understanding decision-making processes, work organization and the implementation of normative frameworks. In any organizational context, the human factor remains central to all aspects of safety system functionality both as the agent of control and as the object of protection.

In this regard, employees may be exposed to a wide range of risks, including hazardous working conditions, psychological stress, physical injuries, chemical hazards, exposure to electromagnetic and ionizing radiation and the consequences of poor organizational structure.

The following illustration (Figure 2) depicts a central human figure representing the individual within the organization. Surrounding this figure are concentric layers symbolizing the various influences and risks that employees may encounter in the workplace as well as the impact a single individual can exert on others.

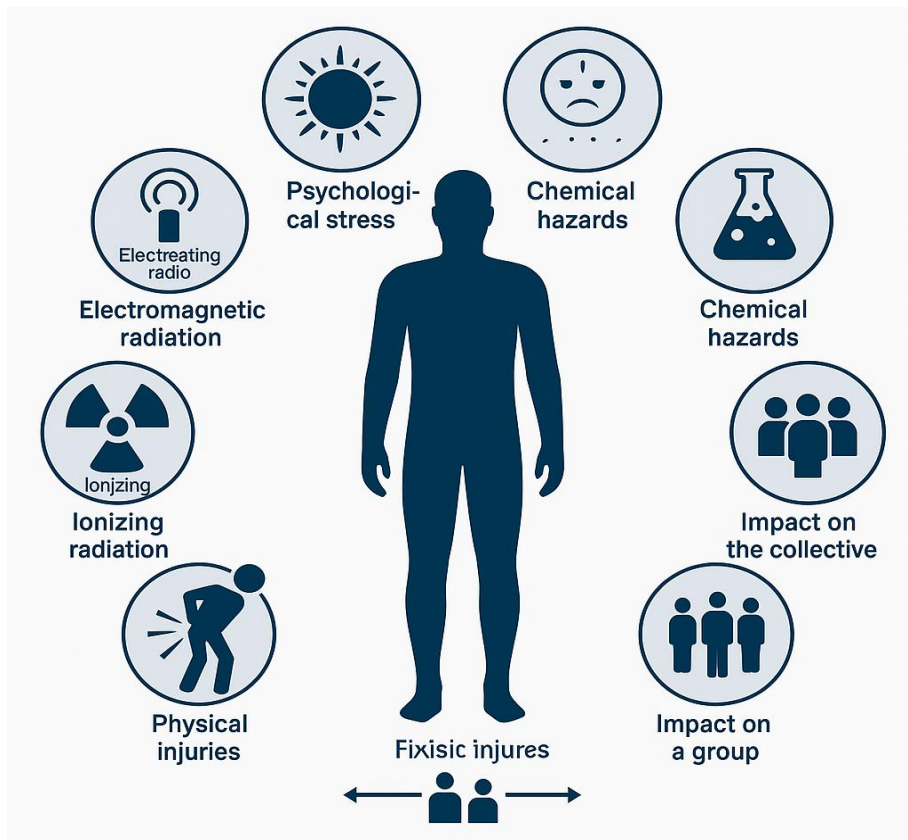


Figure 2. Multidimensional Influences on the Individual in the Occupational Safety and Health System

The illustration presents a central human figure symbolizing the individual within an organization. Surrounding the individual are concentric layers representing various influences and risks that employees may face in the workplace, as well as the influence a single person can exert on others. The essence of this figure lies in its depiction of the dual role of the individual in the OSH system:

1. As an object of protection, exposed to complex and multilayered risks.
2. As an agent of influence, whose behavior, knowledge and attitude can shape safety practices within the organization from setting a personal example, through team collaboration, to institutional impact.

This visual representation reinforces and expands upon the earlier discussion, emphasizing that the individual is not a passive recipient of safety measures, but an active contributor to their development and improvement (Geller, 2021; Jovanović & Petrović, 2022; ISO 45001:2018).

Radomir Lukić (1977) defines science as “an objectively truthful intellectual reproduction of objective natural, social and intellectual processes phenomena,” underlining the inseparable connection between experience and knowledge. This definition is particularly relevant in the domain of occupational safety and health management, where decisions must

be made based on careful analysis of empirical data, grounded in scientific methodology. Such an approach ensures rational and responsible risk management in the workplace.

Henri Fayol (1916) was among the first to systematize management functions, identifying planning, organizing, leading, coordinating and controlling as fundamental elements of any managerial system. His theoretical framework remains applicable to OSH management, as each of these functions plays a role in safeguarding employee health and safety. However, Mintzberg (1994) argues that management should not be seen as a static process, but rather as a dynamic and complex activity dependent on specific work conditions and organizational actors.

Gordić (2011) emphasizes that management entails decision-making processes within organizations that must account for changes in both external and internal environments. This adaptive approach is particularly crucial in OSH systems, where management must respond swiftly to emerging threats to employee safety. A similar view is offered by Pušić (1973), who describes management as a systemic activity involving planning, organizing, control and ongoing adaptation in line with environmental changes.

Jovanović (2010) underscores the importance of applying knowledge, skills, and tools to achieve organizational goals especially under conditions of uncertainty and variability. Occupational safety and health management requires precisely this application of professional resources to establish systems that minimize risks and optimize safety practices.

Lukić (1977) further stresses that any social reality must be viewed holistically, incorporating the subject of study, phenomena, methods and tools. In this context, law as a normative framework plays a pivotal role in OSH management, providing the institutional foundation for implementing protective measures, enforcing legal regulations and organizing work in compliance with established standards.

In contemporary management, analytical methods and digital technologies are gaining increasing importance. Davenport and Harris (2007) highlight data processing and analytic as key enablers of effective managerial decision-making. In OSH systems, this is reflected in the use of incident, injury and risk data to develop preventive strategies. Drucker (2001) further points out that flexibility and adaptability are essential prerequisites for successful management in modern organizations a notion that, in the safety context, refers to the readiness to confront new challenges and risks in the workplace.

Effective management within occupational safety and health systems requires the integration of theoretical knowledge, practical skills, legal regulation and analytical insight. The human factor remains at the core of this process both as a decision-maker and implementer of safety measures and as the primary subject the system is designed to protect.

Figure 3 The diagram as a whole demonstrates that an effective OSH management system must integrate human-centered approaches with institutional structures. It reflects the dynamic nature of human behavior and acknowledges that safety is both a collective organizational responsibility and a deeply personal imperative. The successful implementation of such a system requires a synthesis of knowledge, practical capability, legal adherence and strategic adaptability - all centered around the human being.

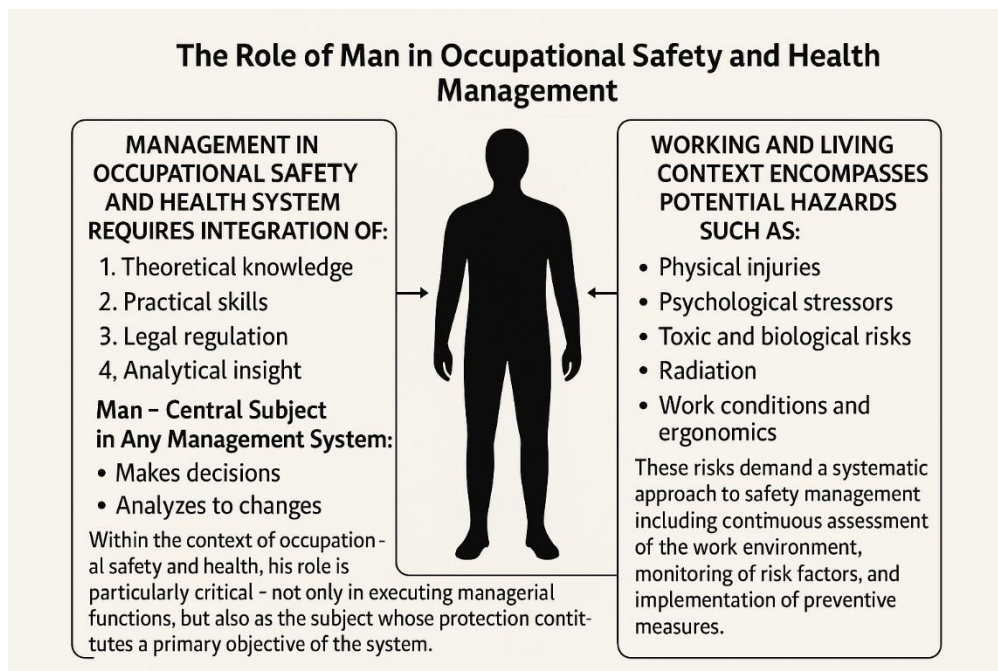


Figure 3. The Role of the Individual in the Occupational Safety and Health Management System

The individual stands as the central subject in any management system, as their capacity for decision-making, data analysis and adaptability forms the foundation of all organizational processes. Within the context of occupational safety and health (OSH), this role becomes particularly critical not only in executing managerial functions, but also as the very subject whose protection constitutes a primary objective of the system.

The working and living context of an employee encompasses a range of potential hazards, such as physical injuries, psychological stressors, toxic and biological risks, exposure to non-ionizing and ionizing radiation, as well as inadequate working conditions and poor workplace ergonomics. These risks demand a systematic approach to safety management one that includes continuous assessment of the work environment, monitoring of risk factors and implementation of preventive measures.

The influence of the individual on the OSH system can be analyzed across three levels of interpersonal relations: influence on one-on-one interactions, on the group (team) and on the collective (the organization as a whole).

At the micro level, every employee impacts their closest colleagues through communication, information exchange and the development of mutual trust (Geller, 2021).

At the meso level, individuals contribute to the shaping of normative behaviors and the overall safety climate within the team through their attitudes, behavior and initiative (Reason, 2020; Probst et al., 2021).

At the macro level, collective behavior is influenced by individuals who assume leadership or model roles, thereby initiating the creation or transformation of organizational safety culture (Schwatka et al., 2020; Conchie & Donald, 2022).

This multilayered influence of the individual plays a key role in sustaining risk management systems and in enhancing the overall level of workplace health and safety.

An effective OSH management system must reflect the dynamic nature of human behavior while simultaneously adhering to relevant regulations, organizational requirements and technological advancements. Such an approach facilitates the creation of optimal conditions for employee protection, promotes operational efficiency and contributes to a high level of organizational resilience.

Objective of the Study

The objective of this study is to investigate and analyze management within the occupational safety and health system, with a focus on both theoretical and practical aspects of applying management principles in dynamic and complex environments. The study is grounded in theoretical approaches and methodological frameworks that facilitate a deeper understanding of management processes in this domain.

Management, as a process of decision-making and resource organization, is based on various theoretical models that evolve in response to social, technological and organizational changes. Fayol (1916) defines management through five functions: planning, organizing, leading, coordinating and controlling, while Mintzberg (1994) emphasizes its dynamic and complex nature. Jovanović (2010) highlights the importance of models in project management, whereas Bertalanffy (1968) underscores the role of models in analyzing systemic interactions.

Particular emphasis is placed on the human element as a key subject within the management system. Lukić argues that science is "an objectively true cognitive reproduction of objective natural, social and cognitive processes," implying that management systems arise in response to unique social and organizational conditions. Gordić (2011) stresses that management cannot be considered in isolation from real-world conditions, while Davenport and Harris (2007) highlight the significance of the human factor in strategic decision-making, despite advances in analytics and artificial intelligence.

In this context, the individual's impact on various organizational levels within the occupational safety and health system is of paramount importance. At the micro level, one individual influences others through direct communication, knowledge transfer, risk awareness, and by setting a personal example in implementing safety practices. At the meso level, through team dynamics and informal leadership roles, the individual shapes group behaviors and attitudes, contributing to the development of collective safety awareness. At the macro level, the individual can initiate organizational changes and development initiatives, actively participating in shaping and strengthening the safety culture across the entire organization (Geller, 2021; ISO 45001:2018; Jovanović & Petrović, 2022; Reason, 2016; Cooper, 2020).

Hazards within the occupational safety and health framework encompass physical, chemical, biological, psychological and radiation risks. The aim of this study is a theoretical analysis of management in this area, alongside identifying methodological approaches that enable process improvement through the integration of contemporary technological and organizational models. The focus lies on developing effective strategies for occupational safety and health management grounded in diverse theoretical perspectives.

Methodology

The research was conducted using a combination of methodological approaches that enable a systematic analysis of management in occupational safety and health, employing both quantitative and qualitative methods. The methodological framework is grounded in theoretical models and empirical studies by relevant authors.

According to Radomir Lukić's (1977) definition of science as "an objectively true cognitive reproduction of objective natural, social and cognitive processes," the research methodology integrates literature review, evaluation of management models and the application of statistical methods to assess their impact on workplace safety.

Key methodological approaches employed in the study include:

- **Document Content Analysis:** This approach facilitates the examination of theoretical management models, drawing on the works of Fayol (1916), Pušić (1973) and Mintzberg (1994), who have outlined the evolution of management functions throughout history and their relevance in contemporary contexts.
- **Empirical Research:** This involves both quantitative and qualitative data analysis methods. Quantitative analysis applied statistical techniques to evaluate the influence of management models on worker safety, while qualitative analysis was conducted through interviews and case studies (Jovanović, 2010; Davenport & Harris, 2007).
- **Comparative Method:** Comparative analysis of existing management models in occupational safety was undertaken to identify best practices and provide recommendations for system improvement, drawing upon the works of Bertalanffy (1968), Gordić (2011) and Sterman (2000), who emphasize the importance of a systems approach.

Within the scope of the study, normative-legal framework analysis was also performed. Legal regulations and standards were reviewed, based on Lukić's doctrinal approach (1977), which views law as a complex social phenomenon encompassing normative, political and philosophical dimensions.

Additionally, the research focused on the role of the individual as a key factor in shaping and strengthening occupational safety and health systems. At the micro level, individuals influence colleagues or superiors through direct communication, hazard awareness and personal example in adhering to procedures. At the meso level, within work teams and organizational units, individuals impact team dynamics, safety attitudes, and group behavior through their knowledge, initiative and informal leadership. At the macro level, individuals affect the broader organization by contributing to the creation and maintenance of a safety culture, proposing systemic changes and promoting the integration of safety across all organizational structures (Geller, 2021; Cooper, 2020; ISO 45001:2018; Reason, 2016).

The Human Factor as the Central Subject of Management

Management in occupational safety and health cannot be considered in isolation from the human factor as the central subject of every organizational process. Every management system emerges at a specific point in time, influenced by particular conditions, stakeholders and interests, with humans playing a pivotal role in the creation and implementation of these systems. According to Miodrag Gordić (2011), the human being is simultaneously the

creator and executor of managerial decisions, where cognitive abilities, experience and risk perception directly affect the effectiveness of management systems. This view is supported by earlier authors such as Drucker (2001) and Mintzberg (1994), who emphasize that management is not a static process but a dynamic interaction among people, resources and organizational goals. Radomir Lukić (1977) further highlights that knowledge cannot exist without experience and that a person's capacity to manage derives from their interaction with the environment. This approach underscores the necessity of a holistic consideration of management systems, which must not be merely technocratic constructs but should incorporate the human factor and the specific contexts of application.

It is also important to highlight the individual's influence on immediate social circles that is, on two people, on a group and on the collective. An individual, through behavior, attitudes and decisions, directly impacts close colleagues or supervisors with whom they share daily tasks and communication. This micro-level interaction between two individuals has the potential to affect motivation, safety awareness and the general workplace atmosphere (Schein, 2010). Extending influence to a broader group, an individual can become a carrier of organizational culture and norms, transmitting safety values and standards that are subsequently internalized by group members (Edmondson, 2018). At the collective level encompassing the entire organization or team an individual's impact manifests through changes in policies, procedures and the overall safety climate, thereby contributing to the cultivation of collective responsibility and shared risk awareness (Weick & Sutcliffe, 2015). Comparative analysis of these authors reveals that while Schein emphasizes interpersonal relationships and cultural dimensions, Edmondson focuses on psychological safety and group learning, and Weick and Sutcliffe highlight collective resilience and mindfulness in risk management. The integration of these perspectives enriches the understanding of the complex influence individuals exert at various organizational levels within the context of occupational safety and health.

The work environment entails diverse forms of human hazards. Physical dangers, such as falls, impacts, or improper machinery handling, pose immediate risks to employee health and safety. Chemical hazards including exposure to toxic substances, gases and aerosols further endanger workers, particularly in chemical processing and manufacturing industries. Biological threats, such as exposure to microorganisms, viruses and bacteria, significantly affect the health status of employees, especially within healthcare and food production sectors.

In addition to these factors, prolonged sitting, improper posture and repetitive motions may cause ergonomic issues that gradually impair workers' physical condition. Psychosocial factors such as stress, workplace bullying and high job demands have serious consequences for employees' mental health, while physical exertion and fatigue including overtime and work under extreme conditions additionally burden workers and reduce productivity. Lastly, exposure to various types of radiation, whether ionizing or non-ionizing, can have long-term health effects on employees working with advanced technologies and electromagnetic fields (Ristić et al., 2025; WHO, 2020).

In this regard, every organizational system must be analyzed from strategic, normative-legal and functional perspectives to ensure that management systems not only reflect theoretical assumptions but also the real needs and capacities of the people who implement them. Such an approach enables the development of flexible and adaptive occupational safety and health

management systems capable of responding effectively to the challenges of modern work environments (Gordić, 2011; Edmondson, 2018; Weick & Sutcliffe, 2015).

Results and Discussion

The definition of management in contemporary literature represents a fundamental topic in understanding organizational systems. According to Dragan Živaljević (2022), management can be viewed as the process of decision-making within organizations aimed at achieving objectives while taking into account environmental changes. This approach expands upon the basic management functions originally outlined by Fayol (1916), emphasizing dynamism and adaptability. Similarly, Pušić (1973) highlights the importance of systematic activities related to planning, organizing and controlling, alongside the dynamic response to change.

In modern management, analytics and computing have become essential tools for decision-making. Davenport and Harris (2007) stress the importance of data analysis as the foundation for informed management, whereas Simon (1960) emphasizes the rationality of decision-making processes, acknowledging bounded rationality and the need for adaptive approaches. Today's management increasingly integrates artificial intelligence and simulations, enabling the prediction of patterns and outcomes, thus enhancing the efficiency and accuracy of managerial decisions (Shrestha et al., 2019).

In the workplace, occupational safety and health represent critical challenges. Physical, chemical, biological and psychosocial hazards can seriously compromise employee health and productivity. Bertalanffy (1968) posits that safety management should be regarded as a system in which all elements are coordinated and integrated into a functional whole. Radomir Lukić (1973) further underscores the significance of normative and legal aspects in safety management, emphasizing the need for alignment with social and technical requirements.

A particular importance in contemporary management systems is attributed to the influence of the individual on the immediate social circle on dyads, groups and collectives. Through direct interaction with another person, the individual impacts the formation of safety awareness, motivation and behavior in the workplace, which can be analyzed through the lens of interpersonal communication and social influence (Schein, 2010). At the group level, the individual may act as a catalyst for change in organizational culture, where safety standards and practices are adopted and replicated among members (Edmondson, 2018). At the collective level, encompassing the entire organization or team, an individual's influence can contribute to the development and maintenance of collective responsibility and a vigilant safety climate, which according to Weick and Sutcliffe (2015) enhances organizational resilience to risks and incidents. The analysis of these perspectives reveals that while Schein emphasizes culture and relationships at the micro-level, Edmondson highlights psychological safety in groups, and Weick and Sutcliffe focus on collective mindfulness and resilience as essential for effective safety management.

Successful occupational safety management necessitates the integration of human factors, ergonomics and regulatory considerations at every management stage. Organizations must consider the specificities of their environment and apply flexible approaches, such as Mintzberg's (1994) theories on organizational structures and Drucker's (2001) principles of results-oriented management. This comprehensive approach enables optimal worker protection and safety enhancement, addressing all types of hazards, including radiation exposures with potential long-term health consequences (Ristić et al., 2025; WHO, 2020).

Conclusion

Management within occupational safety and health systems is shaped by specific circumstances, at a given time and in accordance with prevailing conditions. Every management process depends on the particular needs, norms and regulations applicable at that moment. This process involves the engagement of various stakeholders and resources, including organizations, institutions and individuals, whose knowledge and experience contribute to management effectiveness.

In occupational safety, management is crucial as it encompasses risk analysis, hazard assessment and decision-making directly affecting employee health and safety. The work environment involves diverse hazards, including physical, chemical, biological and psychosocial factors. Physical hazards such as falls, impacts and improper machinery handling can cause serious injuries. Chemical risks, including exposure to toxic substances, gases and aerosols, may lead to long-term health consequences. Biological hazards, such as microorganisms, viruses and bacteria, pose significant risks especially in healthcare sectors. Ergonomic factors, including poor posture, prolonged sitting and repetitive movements, can result in chronic injuries and reduced work capacity.

Psychosocial factors, including stress, bullying, high job demands, and emotional pressure, severely impact workers' mental health, diminishing productivity. Additionally, physical exertion and fatigue particularly under overtime and extreme working conditions pose further challenges to maintaining work capacity. Radiation hazards, whether ionizing or non-ionizing, must also be acknowledged for their potential long-term health effects on employees.

A key aspect of occupational safety management is understanding the individual's impact on the immediate social context interaction with one or two people, the group, and the collective as a whole. Through their attitudes, knowledge and behaviors, individuals directly shape the safety culture in one-on-one interactions, potentially increasing or decreasing micro-level risk. For example, the transmission of safety procedures or warnings about potential hazards during direct communication can be crucial for accident prevention.

At the group level, the individual acts as a transmitter and advocate of safety norms, actively shaping group dynamics and influencing collective behavior. Groups serve as powerful mechanisms of social influence, where certain safety behaviors are either reinforced or diminished. Through personal conduct, initiative, and engagement, individuals can spark positive change and foster a culture of enhanced safety awareness. In this context, psychological safety within teams plays a vital role by allowing members to voice opinions, express concerns and propose improvements without fear of negative repercussions.

At the organizational level, individuals contribute to the formation and evolution of a shared safety culture and core values. Leadership both formal and informal plays a crucial role in setting strategic direction and establishing policies that define safety expectations and standards. When accountability for employee health and safety is collectively embraced, it nurtures a climate of shared responsibility and care. This collaborative foundation not only reduces risk but also strengthens the organization's resilience in the face of unexpected events or crises. This complex network of individual influences directly impacts the effectiveness of safety management systems. Occupational safety and health management must be tailored to the specific conditions and needs of the organization, integrating strategic, legal and organizational factors to ensure system efficacy. The process cannot be

static; it must evolve and adapt to new challenges, including technological advancements, legislative changes and social conditions.

Continuous research and the application of scientific methods are essential for improving safety systems. Occupational safety and health management must be flexible, adaptive and focused on preserving employees' health and lives the ultimate goal of every workplace safety system.

References

1. Bertalanffy, L. von. (1968). *General system theory: Foundations, development, applications*. George Braziller.
2. Conchie, S. M., & Donald, I. J. (2022). The role of leadership in safety culture: From individual influence to collective impact. *Safety Science*, 147, Article 105613. <https://doi.org/10.1016/j.ssci.2021.105613>
3. Cooper, M. D. (2020). *Behavioral safety: A framework for success*. Applied Behavioral Sciences Publishing.
4. Davenport, T. H., & Harris, J. G. (2007). *Competing on analytics: The new science of winning*. Harvard Business School Press.
5. Drucker, P. F. (1954). *The practice of management*. Harper & Row.
6. Drucker, P. F. (2001). *The essential Drucker: The best of sixty years of Peter Drucker's essential writings on management*. HarperBusiness.
7. Fayol, H. (1916). *Administration industrielle et générale*. Dunod.
8. Fayol, H. (1949). *General and industrial management* (C. Storrs, Trans.). Pitman Publishing.
9. Forrester, J. W. (1961). *Industrial dynamics*. MIT Press.
10. Geller, E. S. (2021a). *Actively caring for people's safety: Cultivating a brother's/sister's keeper culture*. Cambridge Center for Behavioral Studies.
11. Geller, E. S. (2021b). *People-based safety: The source*. Make-A-Difference Books.
12. Geller, E. S. (2021c). *The psychology of safety handbook* (3rd ed.). CRC Press.
13. Gordić, M. (2011). *Modalni eksperiment u istraživanju potencijalnog sistema bezbednosti države [Modal experiment in the research of a potential state security system]* (Unpublished doctoral dissertation). University Union Nikola Tesla, Belgrade, Serbia.
14. ISO 45001 (2018). *Occupational health and safety management systems – Requirements with guidance for use*. International Organization for Standardization.
15. Jovanović, M., & Petrović, D. (2022a). *Ljudski faktor i organizaciona kultura bezbednosti [Human factor and organizational safety culture]*. Institut za bezbednost i zaštitu.
16. Jovanović, M., & Petrović, D. (2022b). *Uloga pojedinca u oblikovanju kulture bezbednosti [The role of the individual in shaping safety culture]*. *Zbornik radova sa konferencije o bezbednosti i zdravlju na radu*, 14(2), 88–96.
17. Jovanović, M., & Petrović, N. (2022). *Integracija ljudskog faktora u sisteme upravljanja bezbednošću i zdravljem na radu [Integration of the human factor in occupational health and safety management systems]*. *Zbornik radova sa međunarodne konferencije o bezbednosti i zdravlju na radu*, 12(1), 112–123.

18. Jovanović, P. (2010). Upravljanje projektima i investicijama [Project and investment management].
19. Jovanović, S., & Petrović, D. (2022). Menadžment rizika i bezbednosna kultura [Risk management and safety culture]. Univerzitet u Beogradu.
20. Kaplan, R. S., & Norton, D. P. (1996). The balanced scorecard: Translating strategy into action. Harvard Business School Press.
21. Lukić, R. (1963). Notes of a sociologist on the concept of man. Philosophy, (Beograd).
22. Lukić, R. (1973). Empirical study of law. In Proceedings of the International Symposium on the Methodology of Legal Sciences (p. 41). Serbian Academy of Sciences and Arts.
23. Lukić, R. (1977). Methodology of law. Serbian Academy of Sciences and Arts, Department of Social Sciences.
24. Mintzberg, H. (1994). The rise and fall of strategic planning. Free Press.
25. Porter, M. E. (1985). Competitive advantage: Creating and sustaining superior performance. Free Press.
26. Probst, T. M., Lee, H. J., & Meng, K. (2021). A dynamic model of safety climate: The role of trust and participation in the safety system. *Journal of Applied Psychology*, 106(3), 422–435. <https://doi.org/10.1037/apl0000504>
27. Pušić, E. (1973). Problemi upravljanja [Problems of management].
28. Reason, J. (2016). Managing the risks of organizational accidents. Routledge.
29. Reason, J. (2020). Managing the risks of organizational accidents (2nd ed.). Routledge.
30. Schwatka, N. V., Goldenhar, L. M., & Johnson, S. K. (2020). A framework for developing trust as an occupational health and safety strategy. *Journal of Safety Research*, 72, 203–213. <https://doi.org/10.1016/j.jsr.2019.12.016>
31. Simon, H. A. (1960). The new science of management decision. Prentice-Hall.
32. Sterman, J. D. (2000). Business dynamics: Systems thinking and modeling for a complex world. Irwin McGraw-Hill.
33. Živaljević, D. (2022). Radikalizacija društva i terorizma [Radicalization of society and terrorism].

MENADŽMENT U SISTEMU BEZBEDNOSTI I ZDRAVLJA NA RADU

Violeta Đorđević⁴, Jovan Gordić⁵, Boro Krstić⁶

Apstrakt

Upravljanje u sistemu bezbednosti i zaštite na radu zasniva se na organizovanom pristupu planiranju, vođenju i kontroli procesa sa ciljem očuvanja zdravlja i sigurnosti zaposlenih. Ovaj proces odvija se u specifičnim uslovima radnog okruženja, uz stalno prilagođavanje društvenim, tehnološkim i zakonodavnim promenama. Upravljačke aktivnosti uključuju analizu rizika, procenu opasnosti i primenu preventivnih mera u skladu sa važećim zakonima i standardima. Ključnu ulogu imaju različiti subjekti – od institucija i organizacija do pojedinaca – čije međusobno delovanje doprinosi efikasnosti sistema. Poseban značaj ima uticaj pojedinca na sistem bezbednosti i zdravlja na radu. Svaki zaposleni, kroz svoje ponašanje, nivo svesti i odgovornost, može direktno uticati na bezbednost svojih kolega. Uticaj pojedinca se manifestuje na više nivoa: u odnosu na jednu osobu (npr. mentorstvo ili ukazivanje na opasnosti), na grupu (kroz timsku saradnju, prenošenje dobrih praksi), i na kolektiv (utemeljenjem kulture bezbednosti u organizaciji). Time se doprinosi ne samo individualnoj zaštiti, već i jačanju ukupnog sistema BZR. Fokus ovog rada je na istraživanju značaja upravljanja u oblasti bezbednosti i zaštite na radu, kao i njegovog uticaja na smanjenje profesionalnih rizika i unapređenje uslova rada. Rezultati istraživanja doprinose razumevanju upravljačkih praksi koje vode ka održivom i stabilnom sistemu zaštite zaposlenih.

Ključne reči: menadžment bezbednosti, upravljanje, čovek (pojedinaac), kultura bezbednosti.

4 Violeta Đorđević, doktorand, samostalni stručni savetnik u Ministarstvu zaštite okruženje, Beograd, E-mail: violeta.veselinovic1404@gmail.com

5 Jovan Gordić, doktorand, Pravni fakultet, Univerzitet u Nišu, E-mail: gordicjovan@gmail.com

6 Boro Krstić, vanredni profesor, Univerzitet „Bijeljina”, Poljoprivredni fakultet, Bijeljina, E-mail: direktor@ubn.rs.ba