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## The Utilization of Lean Management Tools in the Application of Risk Management Methods According to ISO 31000:2018

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Submitted 15/12/23, 1st revision 12/01/24, 2nd revision 22/01/24, accepted 20/02/24

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**Abstract:**

**Purpose:** The article juxtaposes risk management methods according to ISO 31000:2018 with selected Lean Management tools to identify potential enhancements for rendering these methods more effective for enterprises.

**Design/Methodology/Approach:** The objective of the research was the identification of Lean Management tools that could serve as support for risk management methods according to ISO 31000:2018. The theoretical-cognitive aim involved a substantive review of subject literature and scientific works within the broad spectrum of risk management. The analysis of the presented problem allowed for the recognition of previously unidentified potential within selected Lean Management tools to enhance the risk management methods outlined in ISO 31000:2018.

**Findings:** The generated conclusions will enable enterprises utilizing ISO 31000:2018 to increase the likelihood of the effectiveness of their risk management methods, as they will be enriched with selected Lean Management tools.

**Practical Implications:** Lean Management tools have been presented in a form conducive to their practical application in enterprises employing risk management methods according to ISO 31000:2018. The conceptual work's outcome includes recommendations for enterprises utilizing risk management methods according to ISO 31000:2018, concerning the feasibility of implementing these methods with selected Lean Management tools.

**Originality/Value:** The authors present the possibilities of utilizing selected Lean Management tools in enterprises employing risk management methods according to ISO 31000:2018. The implementation of the presented Lean Management tools requires actions leading to certain changes in the functioning of the enterprise, which may contribute to reducing the likelihood of undesirable events.

**Keywords:** Lean Management tools, Lean Management, risk, risk management, ISO 31000.

**JEL codes:** D81, G32, L15.

**Paper Type:** Research article.

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## **1. Introduction**

The Proposal for the Utilization of Lean Management Tools in the ISO 31000 Risk Management System may contribute to the discovery of previously unidentified solutions that respond to contemporary threats faced by enterprises (and supply chains in which they participate), stemming, among other factors, from the global pandemic and a relatively challenging geopolitical situation.

Identifying specific tools derived from the Lean Management concept related to supporting the effectiveness of risk management methods according to the ISO 31000 system would allow for an increased potential for the dissemination of these methods among enterprises of various operational profiles.

The aim of the article is to analyze risk management methods according to the ISO 31000 standard and attempt to identify Lean Management tools with the potential to enhance the probability of effectiveness of these methods in risk management-related processes.

The article is conceptual in nature, and the research scheme involves correlating risk management methods according to the ISO 31000 standard with selected Lean Management tools. The conceptual work's outcome includes recommendations for enterprises utilizing risk management methods (according to the ISO 31000 system) regarding the possibility of supporting these methods with specific Lean Management tools.

The proposed research scheme allows for a clear presentation of the role of selected Lean Management tools in increasing the likelihood of effectiveness in holistic risk management in enterprises employing risk management methods according to the ISO 31000 standard. This article is based on a comprehensive literature review in the field of risk management and Lean Management (including Lean Manufacturing); the research has enabled the determination of the potential compatibility of risk management processes originating from the ISO 31000 standard with selected Lean Management tools.

## **2. The Characterization of the ISO 31000:2018 Risk Management System**

The active involvement of top management in matters related to risk management within an enterprise is essential (Abidin *et al.*, 2019; Velinov *et al.*, 2023). Top management should establish a multidisciplinary team for risk management, comprising representatives from all critical areas or departments operating in the enterprise. This inclusion is crucial as the assessment of specific risks may vary depending on the perspectives of employees in different areas or departments.

The initial task of the multidisciplinary risk management team should be the identification of major risks potentially impacting the enterprise. Subsequently, team

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members should assess the identified risks. The most commonly employed criteria for the subjective assessment of risk-by-risk management teams include the likelihood of a specific risk occurring, as well as the potential consequences associated with the manifestation of that risk.

Risk management should occur within a systematic and coordinated action plan, integrating processes across the entire organization. It is essential for the roles of members of the multidisciplinary risk management team to be clearly defined, with each member understanding their duties and the scope of their responsibilities (Syahputri and Kitri, 2020; Noja *et al.*, 2021).

The first edition of ISO 31000 was published by the International Organization for Standardization (ISO) in 2009, with the current ISO 31000 version released in 2018. In comparison to the previous edition, the 2018 version significantly emphasizes the involvement of top management in the strategic processes of the enterprise, particularly those related to risk management in these processes.

According to ISO 31000:2018, ensuring that the enterprise and employees have the necessary resources for effective risk management is one of the main responsibilities of top management. Another notable change from the previous version is a greater emphasis on assigning specific authorities and responsibilities for risk management to particular positions in the organizational structure.

The recommendations outlined in ISO 31000:2018 emphasize that corporate policies should not solely be determined by customer requirements or broad economic considerations but also by potential risks and methods that can mitigate these risks.

ISO 31000:2018 is a universal standard applicable to enterprises across various industries, not dedicated to specific organizational profiles. Furthermore, the current version is written in simpler language compared to the 2009 version, making it more accessible to a wider range of employees in enterprises.

ISO 31000:2018 presents eight fundamental principles (ISO 31000:2018, Risk Management – Guidelines):

1. Risk management should be an integral part of all organizational activities.
2. A comprehensive approach to risk management contributes to achieving consistent and comparable results.
3. The risk management process should be adapted to the external and internal context of the organization.
4. Involvement of personnel in the risk management process enhances group awareness and increases the likelihood of its effectiveness, allowing the incorporation of knowledge, views, and perceptions of employees.
5. Enterprises should adapt the risk management process to the dynamic environment and effectively respond to changes.

6. Input data for risk management should be current, clear, and accessible to all authorized individuals.
7. Organizational culture, emphasizing the role of effective risk management, positively influences all aspects of risk management regardless of the organizational structure level.
8. The risk management process should be continuously monitored and improved.

According to ISO 31000:2018, the structure of an enterprise should be based on five coexisting elements within the organizational culture.

1. Integration - the risk management process relies significantly on understanding the organizational structure of the enterprise. The structures of individual organizations vary; hence the risk management process should be characterized by an individual approach. Risk exists in all areas of the enterprise - effective risk management should be designed in a holistic approach that determines coherent solutions for individual departments/areas.
2. Design - when designing a risk management system, the enterprise should have a thorough understanding of its context, i.e., the combination of external and internal factors that influence the enterprise's approach to defining and achieving its goals.
3. Implementation - the implementation and adherence to established assumptions of the risk management system require the top management to cultivate awareness among employees in this area, as well as constantly emphasize the role of engagement by all enterprise employees.
4. Evaluation - the enterprise should record the results of the risk management system and subject them to evaluation, as only such an approach ensures monitoring the achievement of the risk management system's goals.
5. Improvement - concerning data and trends, the enterprise should continuously refine its risk management system.

According to ISO 31000:2018 standards, an effective risk management process should consist of (ISO 31000:2018, Risk Management – Guidelines):

1. Uninterrupted communication and open consultations.
2. Scope, organizational context, and explicit assessment criteria.
3. Systematic risk assessment.
4. Description of risk procedures.
5. Principles of monitoring and reviewing the system.
6. Recording and reporting the functioning of the risk management system.

Risk management according to ISO 31000:2018 should be a systematic and repetitive (iterative) process. The enterprise should manage risk in a procedural manner, i.e., pre-determined and organized. It is also worth noting that the risk management system should be individually tailored to the specific nature of each

organization, as an individual approach increases the likelihood of minimizing losses and generating maximum added value for the enterprise (Rampini, Takia, Berssaneti, 2019).

The main benefits of implementing a risk management system in an enterprise are (Wicaksono, 2020):

1. More accurate estimation of the operating costs of the enterprise.
2. Faster response (time waste reduction) in the event of an undesirable situation (because a plan of action has been established beforehand).
3. Emphasis on the importance of a continuous improvement-based approach.
4. Involvement of contractors in risk management processes (which can result in, for example, a reduction in complaint trends).
5. Adaptation of the enterprise's organization to human and cultural factors.
6. According to ISO 31000:2018, all employees should be responsible for the risk management system in the organization. Risk oversight should occur continuously in all processes (in accordance with the previously conducted risk analysis). The aim of the risk management system is also to clearly define the conditions of the enterprise's organization, responsibilities, and qualifications of personnel in each area of its activity.

### **3. Utilization of Lean Management Tools in Methods Dealing with Risk According to ISO 31000:2018**

The ISO 31000:2018 system is characterized by seven methods of dealing with risk. Choosing the most appropriate method involves balancing potential benefits against potential losses.

The justification for choosing the enterprise's risk strategy should include not only economic considerations but also all commitments to internal and external stakeholders. The selection of appropriate risk management methods should be preceded by a thorough risk analysis, taking into account the available resources of the enterprise.

Furthermore, risk management methods should not hinder the achievement of previously established goals or be inconsistent with the mission and vision of the enterprise (ISO 31000:2018, Risk Management - Guidelines).

Table 1 presents a comparison of the possibilities of using selected Lean Management tools in methods of dealing with risk according to ISO 31000:2018. The purpose of this proposal is an attempt to identify the possibilities of implementing methods of dealing with risk according to ISO 31000:2018 using selected Lean Management tools.

**Table 1.** Comparing the potential application of selected Lean Management tools in the methods of risk management according to ISO 31000:2018.

RISK MANAGEMENT METHODS ACCORDING TO ISO 31000:2018	LEAN MANAGEMENT TOOLS
Risk avoidance by not taking actions or discontinuing activities that pose a risk	Ishikawa Diagram
Taking or increasing risk to exploit an opportunity	Hoshin Kanri
Removing the source of the risk	Cykl PDCA
Reducing the likelihood of risk occurrence	Poka Yoke
Changing potential consequences resulting from risk occurrence	Teamwork
Risk sharing/export	Outsourcing
Maintaining risk based on conscious decisions	Nemawashi

*Source:* Own elaboration.

Table 1, each of the risk management methods according to ISO 31000:2018 is juxtaposed with a Lean Management tool. In the assessment of the authors of this article, individual tools have the potential to enrich and enhance all risk management methods according to ISO 31000:2018. Even meticulously considered and theoretically implemented risk management methods may not yield the expected results when an undesirable situation occurs.

Individual risks require a customized approach; hence, the proposed Lean Management tools exhibit distinct purposes. During the occurrence of an undesirable situation, the company should primarily focus on the nature of the risk, as it is the character of the risk that will determine the choice of the risk management method.

The presented Lean Management tools have the potential to support the decision-making process regarding the selection of a risk management method for a specific risk.

Furthermore, the proposition to utilize individual Lean Management tools may assist not only internal decision-makers within the company but also external stakeholders with vested interests.

### ***The Ishikawa Diagram as a Tool Aiding Risk Avoidance:***

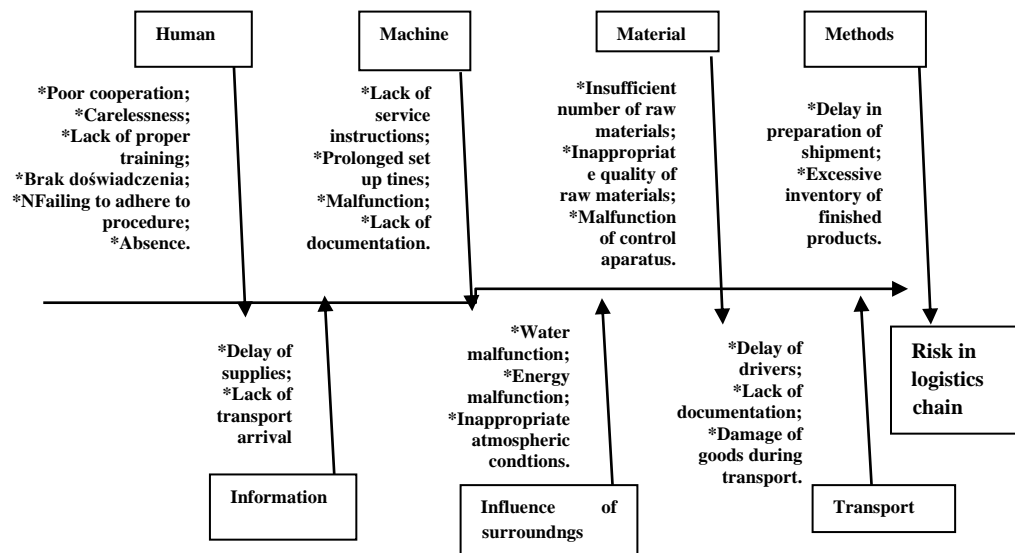
Ishikawa diagrams were popularized in the early second half of the twentieth century by Kaoru Ishikawa, an employee of the "Kawasaki" company, who, due to his achievements, became one of the pioneers of modern quality management (Neyestani, 2017). The Ishikawa diagram is also referred to as a fishbone diagram (due to its shape) or a cause-and-effect diagram.

Despite the passage of many years since its inception, the Ishikawa diagram continues to be successfully utilized in many enterprises for identifying the root causes of problems and, consequently, for identifying risks in various processes.

The Ishikawa diagram is a graphic tool used, among other purposes, for identifying the causes of quality defects and waste. It presents categories that constitute the functioning of the enterprise, as well as potential risks that may arise in these categories (Luca, 2015).

The Ishikawa diagram is an excellent tool for risk identification (including project risk) – it schematically presents categorized information about potential risks in the enterprise (Monat, 2012). To apply the Ishikawa diagram in the risk avoidance process, it is necessary to first group potential causes of these risks into main categories, which typically include (Paraschivescu, 2006): materials, machinery, personnel, applied methods, leadership, and the environment.

**Figure 1.** Use of the Ishikawy graph in avoiding risk



*Source: Galińska B., 2017.*

Figure 1 graphically presents the main categories of the enterprise's functioning in which there is a probability of encountering risks. The identification of risks is typically inseparable from risk avoidance since enterprises can consciously avoid only those risks that are known and included in the risk analysis. The areas of application of the Ishikawa diagram are constantly expanding - the universality of the Ishikawa diagram facilitates its utilization in enterprises regardless of the specificity of their operations.

***Hoshin Kanri as a Decision Support Tool for Increasing Risk to Exploit Opportunities:***

Hoshin Kanri focuses on implementing systematic actions aimed at achieving the prioritized goals of the enterprise in the improvement of its operational processes (Dias and Tenera, 2020). The Hoshin Kanri tool aids managers in the execution of strategic intentions (Rodríguez, Gutierrez, and Fuentes-Fuentes, 2022). It is believed that the utilization of Hoshin Kanri, derived from the Lean Management concept in strategic management, yields significantly better results than traditional approaches to strategic management.

In strategic management, Hoshin Kanri dictates a process-oriented approach, meaning the development of a shared, coherent, and systematic action plan involving employees at all organizational levels. The primary objective of Hoshin Kanri is to strengthen and unify the entire enterprise, with a strong emphasis on intellectual, material, infrastructural, and financial resources (Worley and Doolen, 2006).

One of the key goals of Hoshin Kanri is also to stimulate and harness creative thinking among its employees. Creative thinking by employees who understand the mission and vision of the enterprise is essential for the company to establish a leadership position in its field/industry. Hoshin Kanri also requires managers and employees at lower levels to be independent experts in their work environments, necessitating the company's investment in comprehensive training.

Consequently, Hoshin Kanri leads to strong self-control among employees resulting from a better understanding of the company's policies, fostering overall motivation, continuous improvement, and waste elimination (Jelenc, Lerner, and Knapic, 2020).

Strategic management employing Hoshin Kanri can contribute to making sound strategic decisions by managers even when the validity of a particular decision is doubtful in the initial phase (Melander *et al.*, 2016). An exemplary case of a company that consciously made a risky decision regarding future development is Apple.

Steve Jobs deliberately formulated an original vision for the strategic management of Apple and consistently executed it (the entire management strategy was focused on the iPhone). It is noteworthy that the iPhone was not the first touchscreen phone on the market (all previous touchscreen models did not attract lucrative customer interest). In 2007, Apple introduced a phone with significantly shorter battery life than its competitors.

Additionally, the iPhone lacked a physical keyboard (which consumers were attached to at that time), was relatively expensive, and its operating system was incompatible with the majority of computers (Windows). As the CEO, Steve Jobs



could have chosen a less risky path of strategic management and produced phones similar to the competition.

However, he opted for an innovative and exploratory approach to the market. The conscious increase in risk proved to be highly profitable in this case. It is important to note that Apple's success was also attributed to highly effective marketing and the challenges faced by the competition at that time.

### ***PDCA Cycle as a Tool Supporting the Identification of Risk Sources:***

The PDCA (Plan-Do-Check-Act) tool is a cycle of process management. The PDCA cycle was popularized in the 1950s by the American quality management expert Edward Deming (Isniah, Purba, and Debora, 2020).

The PDCA cycle involves the continuous repetition of four phases. In other words, this cycle consists of four phases aimed at standardizing and improving actions in the processes within the enterprise. The PDCA cycle includes (Jagtap and Teli, 2015):

- Plan - involves planning processes and determining expected results.
- Do - the phase where the planned actions are implemented.
- Check - the phase involving the assessment of compliance with previously established criteria.
- Act - in the fourth and final phase, actions are taken for comprehensive improvement and enhancement of the process.

Deming introduced the PDCA cycle in Japan (Leitner, 1999). Over time, the process-oriented approach revolutionized management styles in many companies worldwide. The application of the PDCA cycle, combined with the Eastern work culture, facilitated a radical improvement in the quality of products manufactured by Japanese companies (Juchniewicz, 2017).

Edward Deming did not focus solely on a quantitative approach to process management and quality (Stashevsky and Elizur, 2000). Deming assumed that if anything went wrong/incorrectly in a process, it was not the fault of the employee but rather the result of an improperly designed process.

It can be presumed, therefore, that the identification of the risk source of an inefficiently designed process was one of the reasons for initiating the search for a tool to facilitate this process.

The development of the PDCA cycle initiated a process-oriented approach that enabled companies to design optimal processes through continuous improvement (Hambach, Kümmela, and Metternich, 2017).

### ***Poka Yoke as a Tool Supporting the Minimization of Risk Occurrence:***

The Poka Yoke tool is most commonly applied as a preventive visualization to prevent errors by workers on the production line resulting from mental and physical fatigue (Widjajanto, Purba, and Jaqin, 2020).

Risk minimization in the context of using Poka Yoke is two-fold. Firstly, employees involved in the production process have visualizations/instructions that graphically indicate the correctness of individual actions—this solution reduces the likelihood of human errors (resulting from fatigue or inattention) in the production process.

Secondly, quality control personnel can also use visualized specifications (for effective Poka Yoke implementation, clear customer instructions or an accepted pattern are necessary), thereby reducing the likelihood of complaint-related risks (Łachajczyk and Dudek-Burlikowska, 2006).

Adapting the workplace to use the Poka Yoke tool has a significant impact on its effectiveness. Using Poka Yoke to maintain order and implement standardized markings (including markings for transport routes and pallet locations) in production and warehouse areas minimizes the occurrence of risks related to errors made by workers (Ayyubi, Mahmudah, Saleh, and Rachmadi, 2020).

Errors arise from various causes, but most of them can be prospectively reduced by employees independently identifying their causes (without interference from superiors). In other words, employees should be able to take appropriate corrective actions to eliminate the source of errors. Prophylactic prevention of errors in processes is the best way to statistically reduce the number of errors—such an approach contributes to lowering the operational costs of the enterprise (Dudek-Burlikowska and Szewieczek, 2009; Zhang, 2014).

It is worth noting that the implementation and subsequent use of Poka Yoke are considered relatively inexpensive, which is why this tool is quite popular in manufacturing companies. The term Poka Yoke is also used in the context of ensuring the correct application of spare parts to a device (e.g., ATM cards, grounded plug inserts, or SIM cards for certain phone models).

### ***Teamwork as a Tool Supporting the Minimization of Potential Consequences Arising from Risk Occurrence:***

Teamwork requires discipline and consistency from its members. Team members should support each other in task execution to ensure that individual projects are properly and timely completed.

A well-functioning team can generate a synergistic effect, reducing the risk of potential consequences resulting from the occurrence of risks. Teamwork,

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originating from the Lean Management concept, also has the potential to eliminate overloads in individual workstations. If the work is unevenly distributed, the team leader is obliged to react (Grubb, Leedom, and Simon, 1993).

The team should be aware of collective responsibility for its work. Each member should know what is expected of them, the purpose of the project, and what matters most to the client. The greater the knowledge about the project and the higher the engagement of individual members, the lower the risk of error consequences.

Good practices in teamwork include (Algashami, Vuillier, Alrobai, Phalp, and Ali, 2019; Ojaghlou *et al.*, 2023; Pham *et al.*, 2022; Thalassinou *et al.*, 2023):

1. Transparency - all team members should know what is expected of them, the scope of their responsibilities, and the criteria by which they are evaluated.
2. Individual assessment - regular meetings with the leader and substantive discussions about the employee's attitude and work. It should be emphasized that if the leader has any issues with individual team members, these should be discussed individually with those individuals; the leader should not criticize individual team members in front of others.
3. Uninterrupted communication - team members should be aware that, in case of doubt, they can consult with other employees responsible for specific aspects of the project.
4. Cyclic meetings discussing the current situation of individual tasks are also good practice in teamwork. These meetings should serve the broad flow of information and maintaining a "healthy atmosphere" in the team. During these meetings, every employee should have the opportunity to express themselves on any issue related to the project (Risser, Rice, Salisbury, Simon, Jay, Berns, 1999).

In a team, a generally understood substitutability should prevail. It is unacceptable for there to be so-called irreplaceable individuals in the team, as this works to the detriment of the team and, consequently, the company (Bell *et al.*, 2018). In the absence of an irreplaceable employee, team tasks are slowed down or completely halted.

The nature of teamwork is different from individual work, as an employee entering a team must adapt to the rules prevailing there (Baker, Day, and Salas, 2006). The role of the leader in the team is crucial, as they are responsible (in the team formation phase) for clearly defining the roles of individual members, presenting their requirements clearly, and indicating the direction of creating the organizational culture (e.g., emphasizing the role of creativity and innovation).

The leader should also ensure continuous competence development (for themselves and their team) through training.

### ***Outsourcing as a Tool Supporting Risk Transfer:***

Outsourcing has become a complex Lean Management tool, as it can be perceived in multiple dimensions (Guimarães and Carvalho, 2013). Outsourcing commonly refers to handing over company activities to an external entity capable of providing the required service within an agreed timeframe and at an acceptable cost.

Outsourcing allows companies to focus on their core business activities by dividing tasks into core and non-core (Teplicka and Daubner, 2013).

Currently, outsourcing is primarily used as a strategic management tool (Potkany *et al.*, 2016). The priority of outsourcing becomes ensuring an adequate level of service/product quality and cost reduction (Giertl, Potkany, and Gejdos, 2015). Outsourcing brings several benefits to companies (Giertl, Potkany, and Gejdos, 2015; Doval, 2016):

1. Greater focus on the company's core activities - auxiliary activities (e.g., cleaning) are delegated to external entities.
2. Access to unavailable know-how - companies can buy and use technologies they did not create themselves, positively impacting their economic efficiency.
3. Risk transfer to other economic entities - reducing costs and consequences in the event of unwanted random events; risk-sharing with an insurance company.
4. Reduction of operating costs - outsourcing allows companies to pay only for the services needed at a particular time (e.g., storage, training, seasonal workers); in other words, outsourcing helps reduce fixed costs.
5. Increased employee productivity - through external training companies, employees can improve their skills (e.g., by using new working techniques), enhancing the quality and efficiency of their work.
6. Flexibility - long-term use of outsourcing makes a company continually expand its network of contacts (drainage of various possibilities; increased experience), thereby increasing the likelihood of fulfilling customized orders for customers.

Collaborating with an insurance company seems to be the best example of risk transfer because, in the event of an adverse event (and of course, meeting the conditions of the insurance company's contract), the insured company is entitled to compensation (Nilson and de Goër de Herve, 2023). It should be noted that in contracts between a producer and a customer, the company that is a party to the agreement (producer) usually bears full responsibility for the delivered finished product.

For the customer, it is not crucial with whom their contractor (producer) collaborates in producing the finished product; what matters most to the customer is that the

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finished product is produced in accordance with the specification (or pattern) provided to the contractor (producer).

***Nemawashi as a Tool Supporting Informed Decision-Making about Risk Retention:***

The Nemawashi tool refers to the process of multifaceted consultations that typically precede the making of important decisions (Matsatsinis and Samaras, 2001). The main advantage of this tool is that it supports broad communication and the process of building grassroots consensus. As a result, decisions are implemented more efficiently, and lower-level employees feel a sense of agency in managing the company, boosting morale (Mazur, Płoszaj, and Olejniczak, 2014).

The East Asian work culture is characterized by attaching great importance to collectivism (Steele and Lynch, 2012). Building consensus is extremely important for the Japanese. Making decisions based on extensive consultations with all stakeholders is a traditional method supporting the management process in Japanese companies.

The Nemawashi tool involves reaching a consensus, in other words, finding a "middle ground" in the decision-making process. When using Nemawashi, it is essential to respect the perspective of employees who do not hold managerial positions in the company's hierarchy. When making decisions in accordance with the Nemawashi tool, the opinions/positions of individuals from lower levels of the organizational structure are also important and valuable, as they provide a different perspective on a specific issue.

Japanese protect the development of their careers by constantly striving for perfection. An inherent part of perfection is avoiding mistakes, leading to frequent informal meetings (also outside working hours). As a result, decision-making in Japanese companies is generally a slow process and can be a source of frustration for Western partners (Bento, 2013).

Due to prevailing cultural principles in Japan, determining factors for advancement in the organizational structures of local companies are age, level of education, and experience within the organization (Adhikari, 2005).

In contrast to Europe or the United States, in Japan, character traits or temperament have significantly less significance in promotions. Regardless of leadership predispositions, a deserving employee (one who has worked in one company for many years) is entitled to promotion.

The only thing that can hinder such an employee's promotion is their potentially irresponsible approach to job duties (e.g., glaring errors, sabotage). It is also worth noting that in situations where a company's goal is not achieved, or a project is not

completed, the entire responsibility for failures is taken on by the top management (Millikin, 2005).

An example of consciously retaining risk by companies could be a controversial marketing campaign. Hypothetically, this campaign attracts the attention of the target group but simultaneously upsets other audience groups. The company responsible for this campaign receives a complaint from one of the ad viewers, leading to a meeting of employees responsible for marketing, finance, and Public Relations (PR).

After analyzing the situation, employees conclude that the campaign is effective within the target group (sales are increasing). Even though PR employees want to stop the ad emission, representatives of marketing and finance only agree to cut the most upsetting scene.

They argue that the outrage of non-target groups does not translate into sales results. In this situation, after consultations, employees decide to retain the risk at an acceptable level, weighing the brand image among all potential customers with economic gain.

Thanks to Nemawashi, a company can respond to changes and challenges more flexibly, reducing the risk of making wrong decisions. Furthermore, Nemawashi emphasizes close cooperation among all team members, allowing for more effective exchange of information and knowledge.

Maintaining risk at an appropriate level is a crucial task for any organization that wants to achieve and maintain success. Maintaining risk at an appropriate level involves balancing between risk acceptance and avoidance, allowing the organization to pursue its goals and strategies without unnecessary exposure to harm.

#### **4. Conclusions**

The implementation of a risk management system requires numerous actions and far-reaching changes in the functioning of the enterprise, but it brings undeniable benefits in the organizational and economic spheres. The risk management system should be developed by those employees who will be subject to its guidelines because all employees are responsible for its operation.

When a company focuses on exploiting existing solutions, theoretically reducing the risk of errors, continuous avoidance of innovation leads these enterprises to stagnation, consequently resulting in the loss of competitive attractiveness. In order to generate added value for their customers and attain/retain a strong competitive position, enterprises should continuously explore potential development opportunities.

The implementation of new solutions from the perspective of the enterprise always entails some risk. Therefore, many contemporary organizations opt to implement the ISO 31000:2018 risk management system, as this system coordinates actions aimed at minimizing risk, thereby facilitating the achievement of the enterprise's set objectives.

The tools of the Lean Management concept identified in this study appear to have the potential to support methods of dealing with risk according to ISO 31000:2018.

On the one hand, their utilization promotes the maximum exploitation of existing solutions (maximum value generation; waste elimination).

On the other hand, they compel enterprises to continuously improve (stimulating employee creativity and innovation), resulting in the exploration of new possibilities.

### References:

- Abidin, H.Z. 2019. i Inni, Effectiveness of Enterprise Risk Management Practices: A Case Study. *Business Management and Strategy*, 10(2), 213.  
doi:10.5296/bms.v10i2.15800.
- Adhikari, D.R. 2005. National Factors and Employment Relations in Japan. *Japan Institute of Labour Policy and Training*.
- Algashamit, A., Vuillier, L., Alrobai, A., Phalp, K., Ali, R. 2019. Gamification Risks to Enterprise Teamwork: Taxonomy, Management Strategies and Modalities of Application. *Systems*, 7(1).
- Ayyubi, M.Ch.A., Mahmudah, H., Saleh, A., Rachmadi, R.R. 2020. Implementation of Poka-Yoke System to Prevent Human Error in Material Preparation for Industry, *International Seminar on Intelligent Technology and Its Applications*.  
doi:10.1109/ISITIA49792.2020.9163707.
- Baker, D.P., Day, R., Salas, E. 2006. Teamwork as an Essential Component of High-Reliability Organizations. *Health Services Research*, 41(4/2).  
doi:10.1111/j.1475-6773.2006.00566.x.
- Bell, S.T. 2018. i Inni, Team composition and the ABCs of teamwork. *American Psychologist*, 73(4). doi:10.1037/amp0000305.
- Bento, J.C. 2013. Food Supplements: An Expansion Strategy for Europe. *Kowa*.
- Dias, R.M.F., Tenera, A.M.B.R. 2020. Integrating Balanced Scorecard and Hoshin Kanri a review of approaches. *Independent Journal of Management & Production*, 11(7).
- Doval, E. 2016. Is outsourcing a strategic tool to enhance the competitive advantage? *Review of General Management*, 23(1).
- Dudek-Burlikowska, M., Szewieczek, D. 2009. The Poka-Yoke method as an improving quality tool of operations in the process. *Journal of Achievements in Materials and Manufacturing Engineering*, 36(1).
- Galińska, B. 2017. Zarządzanie ryzykiem w łańcuchu logistycznym przedsiębiorstwa. *Organizacja i Zarządzanie*, 6.
- Giertl, G., Potkany, M., Gejdos, M. 2015. Evaluation of Outsourcing Efficiency Through Costs For Its Use. *Procedia Economics and Finance*, 26.

- Grubb, G., Leedom, D., Simon, R. 1993. i Inni, Effects of Crew Coordination Training and Evaluation Methods on AH-64 Attack Helicopter Battalion Crew Performance. Fort Rucker. US Army Research Institute, Aviation Research and Development Activity.
- Guimarães, C.M., de Carvalho, J.C. 2013. Strategic outsourcing: a lean tool of healthcare supply chain management. *Strategic Outsourcing: An International Journal*, 6(2). doi:10.1108/SO-11-2011-0035.
- Hambach, J., Kümmela, K., Metternich, J. 2017. Development of a digital continuous improvement system for production. *Procedia CIRP*, 63. doi:10.1016/j.procir.2017.03.086.
- Isniah, S., Purba, H.H., Debora F. 2020. Plan do check action (PDCA) method: literature review and research issues. *Jurnal Sistem dan Manajemen Industri*, 4(1). ISO 31000:2018, Risk Management - Guidelines.
- Jagtap, M.M.M., Teli, S.N. 2015. PDCA Cycle As TQM Tool-continuous improvement of warranty. *Int. J. Recent Technol. Mech. Electr. Eng.*, 2(4).
- Jelenc, L., Knapic, V. 2020. Hoshin Kanri - western management insights on content and process. 11th International Odyssey Conference on Economics and Business.
- Juchniewicz, M. 2017. Koncepcje doskonalenia organizacji – ewolucja, krytyka, perspektywy rozwoju. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 463.
- Leitner, P. 1999. Japan's post-war economic success: Deming, quality, and contextual realities. *Journal of Management History*, 5(8). doi:10.1108/13552529910290539.
- Luca, L. 2015. A new model of Ishikawa diagram for quality assessment. *Materials Science and Engineering*, 161.
- Matsatsinis, N.F., Samaras, A.P. 2001. MCDA and preference disaggregation in group decision support systems. *European Journal of Operational Research*, 130(2). [https://doi.org/10.1016/S0377-2217\(00\)00038-2](https://doi.org/10.1016/S0377-2217(00)00038-2).
- Mazur, S., Płoszaj, A., Olejniczak, K. 2014. Searching for Inspiration. Practices from Twelve Countries. *Wydawnictwo Naukowe Scholar*.
- Melander, A. 2016. i Inni, Introducing the Hoshin Kanri strategic management system in manufacturing SMEs. *Management Decision*, 54(10). doi:10.1108/MD-03-2016-0148.
- Millikin, J.P. 2005. The Global Leadership of Carlos Ghosn at Nissan. *Thunderbird International Business Review*, 47(1).
- Monat, J.P. 2012. Enhanced Risk Assessment Matrix for the Management of Project Risks. *Project Management Institute*.
- Neyestani, B., 2017. Principles and Contributions of Total Quality Management (TQM) Gurus on Business Quality Improvement. Department of Civil Engineering, De La Salle University. <https://doi.org/10.5281/zenodo.345428>.
- Nilson, F., de Goër de Herve, M. 2023. Exploring the transfer of risks. *Safety Science*, 166. <https://doi.org/10.1016/j.ssci.2023.106240>.
- Noja, G.G., Cristea, M., Thalassinou, E.I., Kadłubek, M. 2021. Interlinkages between government resources management, environmental support, and good public governance. *Advanced Insights from the European Union. Resources*, 10(5), 41.
- Ojaghlou, M., Ugurlu, E., Kadłubek, M., Thalassinou, E.I. 2023. Economic Activities and Management Issues for the Environment: An Environmental Kuznets Curve (EKC) and STIRPAT Analysis in Turkey. *Resources*, 12(5), 57.
- Paraschivescu, A.O. 2006. *Managementul calitatii*. Tehnopress Publishing.



- Pham, T.H., Hoang, T.T.H., Thalassinou, E.I., Le, H.A. 2022. The Impact of Quality of Public Administration on Local Economic Growth in Vietnam. *Journal of Risk and Financial Management*, 15(4), 158.
- Potkany M. 2016. i Inni, Outsourcing in conditions of SMEs – The potential for cost savings. *Polish Journal of Management Studies*, 13(1). doi:10.17512/pjms.2016.13.1.14.
- Rampini, G.H.S., Takia, H., Berssaneti, F.T. 2019. Critical Success Factors of Risk Management with the Advent of ISO 31000 2018 - Descriptive and Content Analyzes. *Procedia Manufacturing*, 39, 896.
- Risser, D.T., Rice, M.M., Salisbury, M.L., Simon, R., Jay, G.D., Berns, S.D. 1999. The potential for improved teamwork to reduce medical errors in the emergency department. *Annals of Emergency Medicine*, 34(3).
- Rodríguez, R.C., Gutierrez, L., Fuentes-Fuentes, M.M. 2022. Impact of Hoshin Kanri on lean management: a case study in the food retail industry. *International Journal of Quality & Reliability Management*, 40(4). doi:10.1108/IJQRM-01-2022-0019.
- Stashevsky, S., Elizur, D. 2000. The effect of quality management and participation in decision-making on individual performance. *Journal of Quality Management*, 5(1). [https://doi.org/10.1016/S1084-8568\(00\)00012-2](https://doi.org/10.1016/S1084-8568(00)00012-2).
- Steele, L.G., Lynch, S.M. 2012. The Pursuit of Happiness in China: Individualism, Collectivism, and Subjective Well-Being during China's Economic and Social Transformation. *Soc Indic Res*, 114(2). doi:10.1007/s11205-012-0154-1.
- Syahputri, H.Y., Kitri, M.L. 2020. Enterprise Risk Management Analysis of Group XYZ Based on ISO 31000:2018 Framework. *Asian Journal of Accounting and Finance*, 2(3).
- Teplicka, K., Daubner, M. 2013. Study of the relation between tax competition and tax burden in European union member states. *Ekonomicky casopis*, 61(2).
- Thalassinou, E.I., Kadłubek, M., Norena-Chavez, D. 2023. Theoretical Essence of Organisational Resilience in Management. In: *Digital Transformation, Strategic Resilience, Cyber Security and Risk Management* (pp. 133-145). Emerald Publishing Limited.
- Velinov, E., Kadłubek, M., Thalassinou, E., Grima, S., Maditinos, D. 2023. Digital Transformation and Data Governance: Top Management Teams Perspectives. In *Digital Transformation, Strategic Resilience, Cyber Security and Risk Management* (Vol. 111, pp. 147-158). Emerald Publishing Limited.
- Widjajanto, S., Purba, H.H., Jaqin, S.C. 2020. Novel POKA-YOKE approaching toward industry-4.0: A literature review, *Operational Research in Engineering Sciences: Theory and Applications*, 3(3). doi:<https://doi.org/10.31181/oresta20303065w>.
- Wicaksono, A.Y. 2020. Applying ISO:31000:2018 as Risk Management Strategy on Heavy Machinery Vehicle Division. *International journal of science, engineering, and information technology*, 4(2).
- Worley, J.M., Doolen, T.L. 2006. The role of communication and management support in a lean manufacturing implementation. *Management Decision*, 44(2).
- Zhang, A. 2014. Quality improvement through Poka -Yoke: From engineering design to information system design. *International Journal of Six Sigma and Competitive Advantage*, 8(2).