THE IMPORTANCE OF PROBLEM-SOLVING COMPETENCIES IN ACHIEVING CUSTOMER SATISFACTION

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In today's business environment, in which customer satisfaction plays a crucial role in an organization's ability to survive, problem-solving competencies are considered essential, since they enable organizations to efficiently identify, analyse and solve problems that could have an impact on the customer experience. It is no longer enough for employees in direct contact with customers just to be kind and helpful, as today it is necessary for them to respond quickly and efficiently to challenges that affect customer satisfaction. Problem-solving competencies are widely regarded as a fundamental skill necessary for success in the modern world and are of key importance for all business activities, particularly in customer relations. Along with the primary objective of satisfying customers, successful problem-solving also fulfils the requirements and principles of quality standards linked to improvements, resulting in a better quality of products and services, more efficient business processes, greater customer trust and enhanced business reputation. The authors of this paper point to the issue of insufficient employee motivation in the area of developing problem-solving competencies. There are several reasons for this attitude among employees: the accelerated development of digital technologies encourages the acquisition of digital skills; employees have insufficient awareness of the advantages of gaining competencies; managers lack understanding of the benefits of problem-solving competencies; and young people encounter insufficient opportunities to acquire problem-solving skills within their formal education.

Keywords: Competencies; Problem-solving; Customer satisfaction; ISO 10002.

INTRODUCTION

Customer satisfaction is seen as an intangible asset of the company that positively affects business performance, as it reflects the strength of the organization demonstrated through a steady customer base and strong relationships between the organization and its customers. Customer satisfaction is related to the overall evaluation of the purchase and the customer experience in the engagement with the organization's market offers (Lee et al., 2018).

Although it is believed that employees who are in direct contact with customers should smile, show compassion, apologize or demonstrate a positive attitude, research shows that such activities do not always yield positive results (Marinova et al.,

2018). Research showed that gestures such as smiling or apologizing do not aid in solving the problem, and the customer tolerates them only in the early interaction when the employee needs to become aware of the problem and understand it, and after that, the customer expects to be directed towards solving the specific problem. In the first phase, the customers expect the employee to listen and understand them, then to actively focus on finding the solution, and finally to demonstrate competence and creativity by providing more solution options that are meaningful and relevant from the customer's perspective.

The basic measure of the customer satisfaction index, the ACSI (American Customer Satisfaction Index) is built as a cause-and-effect ("causal model") with indices of latent factors driving

satisfaction on the left side (customer expectations, perceived quality and perceived value), customer satisfaction (ACSI index) in the centre, and the consequences of satisfaction on the right (customer complaints and customer loyalty, including customer retention and price tolerance) (Morgeson III et al., 2023):

- Customer expectations represent a measure of expectations in terms of the quality of the company's products or services.
- Perceived quality is a measure of the customers' assessment of the quality of a company's products or services based on their personal customer experience.
- Perceived value is a measure of quality concerning the price paid. Although price (value for money) is often very important when making a first purchase, its influence on customer satisfaction diminishes considerably with subsequent purchases.
- Customer satisfaction the so-called ACSI score or index is calculated as an evaluated average of three survey questions that measure different aspects of satisfaction with a product or service.
- Customer complaints are measured as the percentage of respondents who stated that they complained directly to the company about a product or service in a given time frame.
- Customer loyalty is the result of combining the likelihood that a customer will make repurchases from the same company in the future together with the probability that they will do so at a different price (i.e. price tolerance).

Thus, customer complaints and customer satisfaction are correlated, and winning over a customer's loyalty depends on the ability to appropriately resolve complaints.

The authors of this paper want to highlight the fact that end-users today expect organizations to solve problems quickly and efficiently, which necessitates that employees in these organizations be professionally trained to actively address these issues. Untimely problem resolution by the organization will negatively affect the user experience, resulting in a decline in customer trust and satisfaction. In this context, the authors have posed the following research questions:

 How do problem-solving methodologies impact customer satisfaction?

- To what extent are employees in organizations interested in engaging in activities aimed at developing problem-solving skills?
- Do organizations understand the end-users need for quick and efficient problem-solving?

CUSTOMER SATISFACTION FROM THE PERSPECTIVE OF MANAGEMENT SYSTEMS STANDARDS

Within the framework of the international ISO 9001 standard, there are requirements specified that are primarily intended to instil confidence in the organization's products and services, thereby increasing customer satisfaction (ISS, 2015a).

In the ISO 9001:2015 standard, the term "customer satisfaction" appears 21 times. It is stated that one of the potential benefits for the organization from applying a quality management system and encouraging opportunities to increase customer satisfaction is promoting the adoption of a process approach, in order to increase customer satisfaction fulfilling customers' requirements. indicates that the goal of the standard is to increase customer satisfaction through the effective application of the system, which requires top management to demonstrate leadership and commitment to customer-centricity by maintaining a focus on increasing customer satisfaction and requiring quality objectives to be relevant to increasing customer satisfaction. It is specified that the organization must analyse and evaluate the level of customer satisfaction, that information on the performance and effectiveness of the quality management system must include trends related to customer satisfaction and that all measures necessary to meet customer requirements and increase customer satisfaction must be applied.

The following titles of the ISO 10000 group of standards referring to customer satisfaction are as follows:

- ISO 10001 Quality management Customer satisfaction - Guidelines for codes of conduct for organizations, which allow customers to boost trust in the organization and better understand their expectations from the organization, thus reducing the likelihood of misunderstandings and complaints.
- ISO 10002 Quality management Customer satisfaction - Guidelines for dealing with complaints in organizations internally.

- ISO 10003 Quality management Customer satisfaction - Guidelines for the external dispute-resolution process for complaints that have not been resolved by the organizations.
- ISO 10004 Quality management Customer satisfaction - Guidelines for monitoring and measurement, which guide measures to increase customer satisfaction, which may strengthen customer loyalty and retention.
- ISO 10008 Quality management Customer satisfaction Guidelines for electronic commerce transactions between business systems and consumers, which provide a basis for increasing customer confidence, as well as improving the organization's ability to satisfy customers and reduce complaints and disputes.

In the ISO 10004 Quality Management standard -Customer Satisfaction - Guidelines for Monitoring and Measuring, customer satisfaction is determined by the gap between customer expectations and the customer's perception of the product or service provided by the organization as well as other aspects of the organization as a whole. To achieve customer satisfaction, the organization first needs to understand customer expectations. They may be explicit or implicit, or unarticulated completely. Customer expectations form the primary basis of products and services that are subsequently planned and delivered. The degree of customer satisfaction determines the degree to which the customer believes that the delivered product or service and other organizational aspects meet or exceed expectations (ISS, 2018).

It is important to differentiate between the organization's view on the quality of the delivered product or service and the customer's perception of the delivered product or service, as well as of the quality of other organizational aspects (such as solving problems and complaints), because the latter also affects customer satisfaction, as shown in the basic model of the user satisfaction index. Given that customer satisfaction is subject to change, organizations should set up procedures for monitoring and regular measuring.

PROBLEM-SOLVING COMPETENCIES

In circumstances where changes in customer demands and continuous product and service innovations are constant, the need for employee education and training is becoming increasingly intense and comes with two requirements: it must be frequent and diverse. To ensure that the acquired knowledge can be applied in business operations, employee education and training must meet one more condition: they must be effective, which means they should lead to the improvement of the organization's performance (Bogetić & Antić, 2023).

The ISO 9001:2015 standard in the 7.2 clause states that an organization must: a) determine the necessary competence of the personnel performing work affecting the performance and effectiveness of the quality management system; b) ensure that these individuals are competent based on appropriate education, training, or experience (ISS, 2015a). If a person has the appropriate education, training, and skills for performing a specific job, they are considered qualified. If a person demonstrates the ability to achieve set or desired goals, they are considered competent. Competence is the demonstrated ability to apply knowledge and skills (ISS, 2015b). Companies dedicated to quality significantly invest in the education and training of their employees, believing that competent employees enhance the organization's value.

Problem-solving is a key competence used in managing change, uncertainty, and surprises, and in all other situations where there is no routine response (Csapó & Funke, 2017). Problem-solving and decision-making, although sometimes used interchangeably, are closely related concepts, since decision-making is one activity within the problem-solving process. Moreover, creative problem-solving is a technique that approaches problems in a new way, as the problem is essentially a new experience. Problem-solving is a self-directed cognitive and behavioural process of discovering and creating solutions to problems that arise in various business domains and requires deep and divergent thinking (Mbebeb, 2019). Problem-solving competencies considered fundamental skills necessary for success in today's world and are crucial for all business activities, especially for handling customer complaints. Effective problem-solving can either lead to losing customers due to dissatisfaction with the complaint resolution process or secure the loyalty of a previously dissatisfied customer by effectively addressing their stated problem.

To achieve competence in problem-solving, it is essential to master different knowledge and skills, such as: understanding business processes,

business activities, authorities and responsibilities; mastering established methods and procedures; developing analytical skills and critical thinking skills; using modern, scientific, technical and innovative methods; possessing moral and ethical values; forming cordial and friendly relations with promoting effective communication: others: effectively dealing with psychological problems such as anger, stress, anxiety and frustration; having constructive points of view regarding various aspects of the organization and individuals; developing time management skills; making productive decisions and having the ability to work under stress (Kapur, 2021).

Problem-solving competencies in business are more important today than ever before because require dynamism, flexibility, they orientation, and decentralization, necessitating managers' creative thinking and agility, especially in identifying problems, devising strategies to solve them, securing and utilizing resources to achieve goals, and establishing a competitive advantage. Organizations with employees who have strong problem-solving competencies are more successful in developing innovative products and services (Atuahene-Gima & Wei, 2011) and more effectively meet the needs and demands of customers. These organizations possess the ability to identify alternative solutions and have a better understanding of customer and operational requirements (Rescalvo-Martin et al., 2022).

Although problem-solving competencies are essential in the hospitality industry, one of the world's largest industries involving intense and frequent interaction between customers and service providers and a dynamic environment where the frequency of problems is usually high, a study involving 144 hotel and restaurant managers has shown inadequate problem-solving competences (Koc, E., et al., 2023). Namely, the managers were asked to complete the survey in two phases. In the first phase, hospitality managers assessed their problem-solving abilities using a belief scale aimed self-evaluating their competencies measuring their willingness to invest time, money and effort to develop their problem-solving skills. In the second phase of the study, managers responded to questions in a problem-solving test based on case studies designed by the McKinsey The study results indicate hospitality managers significantly lack problemsolving skills (test results), and their perception of their problem-solving competencies is exaggerated (self-assessment results). Additionally, the results show a lack of interest in skill development activities in terms of investing time, money, and effort. Based on these results, it can be concluded that the decisions of such managers are risky and not fact-based, negatively affecting business performance. achieving effectiveness efficiency business meeting in operations, customer needs and demands. continuous improvement, and consequently, competitive advantage—all of which are the requirements and principles of management system standards.

New conditions brought about by economic growth or technological development create a new business environment that demands continuous learning and the mastery of new knowledge and skills. Lifelong learning is essential for business development as well as personal growth. From a developmental perspective, lifelong learning aims to discover and develop new mindset and behaviour that enable new solutions. Problemsolving is one of the learning strategies, that is continuous improvement, as defined by Deming's PDCA cycle. For an individual to be inclined to continuously improve their knowledge and skills, they must possess problem-solving skills—from identifying the need for change (learning), diagnosing and analysing the problem, defining a learning strategy, implementing the strategy, and assessing progress, measuring effectiveness of learning and the level of new knowledge. Research conducted among highschool students (Tabancali & Öngel, 2022) shows that a positive self-assessment in problem-solving increases the tendency for lifelong learning, that the key to dealing with difficulties and learning new things is the assessment of individual problem-solving abilities and seeing oneself as a problem-solver. and that there are strong between connections problem-solving competencies educational/professional and development issues.

Although problem-solving competencies ensure competitiveness both in the business world and in the labour market, many studies have shown that graduates still lack the skills needed by the industry and that it is essential to develop certain student abilities during the educational process to improve problem-solving competencies and critical thinking (Sharif et al., 2021). These abilities include the ability to identify and analyse a

problem in a complex or ambiguous situation and develop an evaluation of the situation, the ability to enhance and develop thinking skills through explanation, analysis and evaluation of discussions, the ability to generate ideas and evaluate alternatives, the ability for broad and critical thinking, the ability to make decisions based on evidence, the ability to focus on the assigned responsibility and the ability to understand and adapt to the work environment.

THE PREVALENCE OF PROBLEM-SOLVING COMPETENCIES IN CONTEMPORARY BUSINESS

The World Economic Forum has been conducting studies of the most sought-after competencies needed for the future of business for many years. In the latest report on the future of jobs (WEF, 2023), it is stated that the highest priority for skill development in the period of 2023-2027 is analytical thinking, followed by the encouragement of creative thinking, whereas training for the use of artificial intelligence and big data will take third place among the skills that need to be developed.

According to the same report, analytical thinking and creative thinking remain the most important skills for employees in all organizations in 2023. Analytical thinking is considered a fundamental skill compared to any other skill. Creative thinking, another cognitive skill, ranks second, ahead of the three self-efficacy skills (resilience, flexibility and agility; motivation and selfawareness; and curiosity and lifelong learning - as employees' abilities to adapt to changes related to workplaces). Reliability and detail-oriented take sixth place, behind technological literacy. The ten basic employee skills that are most in demand are complemented by those related to working with others - empathy and active listening, along with leadership and social influence, as well as quality control.

Employees who possess problem-solving competencies can think both analytically and creatively. They have a good blend of analytical, creative, critical thinking and detail-oriented skills. As a result, they are quick to spot problems and apply the most effective measures when problems arise. They also can discover the causes that led to problems and make changes to prevent similar problems in the future. That is why it is necessary to develop the following skills and abilities

through various employee education and training programmes (Choudhar et al., 2022):

- the skill of active listening (active listeners are generally effective problem solvers. They can listen to others to get information that may be useful in solving problems. They appreciate the need to understand others' points of view as well as other people's experiences in order to fully comprehend why a problem occurred and how to solve it effectively);
- the ability of analytical thinking (analytical thinkers can identify logical reasons for the existence of problems, long-term consequences of the problem and the effectiveness of several solutions in order to choose the best one);
- the ability to think creatively (creative minds can combine analytical abilities with imaginative solutions. Individuals with innovative thinking skills may be able to come up with innovative and sophisticated solutions to problems. They may bring forth new ideas as well as unique and experimental solutions to various problems);
- communication skills (problem solvers must be able to communicate effectively and deliver complex information efficiently clearly and concisely);
- the ability to make decisions (solving problems requires making decisions and for those who solve problems to be confident in their assessments and choices):
- collaboration (problem solvers must be able to collaborate effectively with others. Since discovering the best solution often requires collaboration, candidates must be able to demonstrate how they can motivate others to come up with the best ideas and collaborate with them to develop and implement them.

The study conducted by Vidas Bubanja et al. (2023) between February and April 2022 in the Republic of Serbia, on a sample of 50 companies, aimed to assess the attitudes of domestic companies towards the need for the application of new competencies and skills and how they were implemented in employment policies. The study has shown that the majority of employers (74%) provide professional training for their employees. In the implemented programs of professional development for employees in Serbia, who participated in the research, training in technical and technological areas (mostly the application of digital technologies) dominates - 42.5%. However, in the majority of organizations (60%), these

trainings do not include new digital skills (artificial intelligence through different platforms and technologies, data analytics and security, etc.). The second most common skill development area – 27.5% - is managerial skills (teamwork, problemsolving, business decision-making, critical thinking, creativity, interpersonal communication).

When it comes to top-level managers or business owners, 62% of them attended some form of training in the past year. The largest percentage (35.1%) attended training that does not belong to (technical-technological, specified areas managerial or general-cultural - such as a foreign language). 32.4% attended training in managerial skills, 21.6% attended training in technical and technological fields, and 10.8% focused on general areas, such as foreign languages or communication skills. When deciding on hiring candidates, the most important skills to top-level managers were teamwork (72%), friendliness and approachability (62%), adaptability (58%) and punctuality (56%). The conducted research has shown that critical thinking, creativity and communication skills are not among the most sought-after skills when it comes to business in Serbia. According to (Bubanja et al., 2023) without these skills, it is not possible to establish a company environment conducive to efficient problem-solving competitive business.

THE METHODOLOGY FOR RESOLVING CUSTOMER COMPLAINTS ACCORDING TO THE ISO 10002 STANDARD

The SRPS ISO 10002:2019 Quality management standard — Customer satisfaction — Guidelines for complaints handling in organizations defines customer satisfaction as the customers' opinion about the degree to which their expectations have been met, and complaints as a common indicator of a low level of customer satisfaction, where the absence of complaints does not necessarily imply a high level of customer satisfaction (ISS, 2019). A systematic and consistent approach to handling complaints demonstrates an organization's ability to identify and eliminate root causes of problems, improve operational activities, fulfil the principles of quality management - customer focus and continual improvement, and encourage employees to engage and enhance their skills in working with customers.

The complaint handling methodology, according to ISO 10002, involves the following steps (ISS, 2019):

- 1. receipt of complaint (collecting information necessary for effective complaint handling, including a description of the complaint and relevant supporting data; requested legal remedy; products and services to which the complaint refers or the practice of the organization in this regard; deadline for the response; information on individuals, department, branch, part of the organization and market; current actions taken, if any);
- initial assessment of complaint (based on criteria such as seriousness, impact on safety, consequences, complexity, impact and the need and possibility for immediate action, in order to proceed by urgency and importance);
- 3. *investigation of complaint* (investigation of all relevant circumstances and information related to the complaint, appropriately considering the seriousness, frequency and severity of the complaint);
- 4. *response to the complaint* (after appropriate investigation, the organization should provide a response, address the problem and prevent its re-occurrence in the future);
- 5. *communication of the decision* (the decision should be communicated immediately after it is made or the action has been taken);
- 6. *closure of the complaint* (if the complainant accepts the proposed decision or measure, that decision or measure should be implemented and recorded, and if the complainant rejects the proposed decision or measure, the complaint should remain open. This should be recorded, and the complainant should be informed about other available internal and external resources).

The complaint handling process should be continuously improved, as this leads to a more effective analysis of the causes of non-conformity and, consequently, enhances the quality of products and services, as well as business processes, and thus of the system as a whole. Improving the problem-solving process, i.e. handling customer complaints about quality, presumes continuous research into new methods and ways of dealing with complaints, developing problem-solving employees' competencies, introducing innovations, increasing customer focus, improving customer relations, raising customer satisfaction and strengthening organization's reputation and customer loyalty.

THE PROBLEM-SOLVING METHODOLOGY

There are several problem-solving methods, among which the two most common are: DMAIC (define, measure, analyse, improve, control) and PDCA (plan, do, check, act). In the PDCA model, the P phase is of great importance as it involves planning by answering the questions; what, why, how and when. In the DMAIC model, all steps are equally important, starting from defining the problem to controlling it (Arkeya & Faruk, 2017).

The DMAIC model is a data-driven cycle of continuous improvement, developed to identify weaknesses and inefficiencies, especially those causing product or service non-conformities (Sabtu et al., 2023). To solve a problem, the DMAIC methodology uses a set of tools and techniques in a logical way to arrive at viable solutions that will minimize or eliminate the problem, putting the organization in a competitive position (Shankar, 2009). The primary purpose of the Define (D) phase is to identify the problem requiring a solution, define the goals, and form a team responsible for implementing the DMAIC method (Smetkowska & Mrugalska, 2018). In the Measure (M) phase, data and information about the current state need to be collected to identify all deviations that need improvement (Hutwelker, 2019). During the Analyse (A) phase, various tools and methods are used to find the root causes of the problem and determine the key variables associated with the non-conformities affecting the outcome (Smetkowska et al., 2018). In the Improve (I) phase, an action plan is created to eliminate the identified problems and prevent their recurrence. This is a critical phase where, after identifying the root causes, solutions are generated and tested (Almeida et al., 2021). Control (C) is the final phase of the DMAIC methodology, where the results of the changes applied in the improvement phase are evaluated and monitored. This phase ensures that the implemented changes comply with quality specifications and become the standard. It involves monitoring the ability to achieve the expected outcome and providing appropriate training to ensure the problem does not reoccur in the future (Che Ani et al., 2016).

The primary goal of the PDCA cycle is to maintain continuous improvement that never ends (Abuhav, 2017). This method combines four phases: the Plan (P) phase which occurs after identifying the need

for improvement or problem resolution based on collected data and facts, when plans and measures for solving the problem and the method of their implementation are developed; the Do (D) phase which involves the application and execution of the planned activities; the Check (C) phase, the third phase, the purpose of which is to evaluate the effectiveness of the plan and its implementation, as well as to monitor and measure the planned activities and assess their outcome; the Act (A) phase in which the performance is optimized, or a change that resolves the problem is incorporated into regular practice.

In addition to these, many other problem-solving methods and techniques are known, such as the 8D method developed by the Ford company (Kumar et al., 2023), the IDEAL model (Bransford, 1984), the ASQ four-step model (ASQ), TRIZ methodology for creative problem-solving (Ekmekci & Nebati, 2019).

All the mentioned methods rely on different tools for problem-solving at different stages, depending on their purpose: Ishikawa diagram, brainstorming, Pareto analysis, the 5W method (5 whys), FMEA analysis, Edward de Bono's six thinking hats and others (Kurnia, et. al., 2022).

The key goal of the 8D problem-solving methodology is to define the root causes of the problem, implement measures to eliminate the problem identified by the customer, and take appropriate steps to prevent similar problems in the future (Elangovan et al., 2021). The eight disciplines (8D) of systematic problem-solving encompass the following steps (Banica & Belu, 2019; Elangovan et al., 2021; Krajnc, 2012): forming a cross-functional team (D1) - selecting members with adequate knowledge about the product, service, process or system and providing the necessary relevant and documented information, in order to solve the identified problem; in the second step (D2) the problem is described in detail, additional information is provided and the specifications of the problem with all necessary parameters are explained; the third step (D3) involves the identification and implementation of corrections, with the aim of customers and eliminating protecting consequences of the problem, while subsequent steps involve analyzing the root cause and formulating a permanent solution to the problem through corrective measures; identification of the root cause of the problem (D4) represents the basis and prerequisite for determining appropriate

corrective measures for the permanent resolution of the problem; defining corrective measures (D5) ensure effective improvements eliminate the cause of the occurrence of an identical or similar problem; implementation of corrective measures (D6) in accordance with the planned method of implementation and their validation; the seventh step (D7) enables the closure of action plans for problem resolution, verification of its effectiveness and updating documentation, systems processes and accordance with the newly established corrective measures and activities, which is crucial for preventing the recurrence of quality problems; the final step (D8) involves completing the process and reporting on the improvements undertaken in order to constantly learn and improve quality.

Bransford and Stein introduced IDEAL as a problem-solving model capable of improving thinking ability and enhancing skills in the problem-solving process. The IDEAL (Identity, Define, Explore, Act, and Look) model consists of five indicators including (Setyadi, et al, 2019): (I) problem identification, (D) problem definition and analysis, (E) exploring alternative approaches to the problem solving, possible strategies and solutions, (A) acting in accordance with the chosen strategy and (L) looking at the results, chosen strategies, methods of implementation and learning from the acquired experience.

The ASQ model comprises four steps: defining the alternative problem, generating solutions. evaluating and selecting a solution, implementing the solution and monitoring outcomes (ASQ, 2024). TRIZ, on the other hand, was developed as a theory and set of tools to support the resolution of so-called "unusual" problems—those that cannot be solved by known formal methods. TRIZ is a Russian acronym that stands for the Theory of Inventive Problem (Task) Solving and emerged in the mid-20th century in the former Soviet Union as a method that would support the process of generating inventive ideas and original solutions systematically. TRIZ has become a global method that provides best practices in innovation (Souchkov, V., 2016).

As support for business problem-solving, such as addressing customer dissatisfaction, the TRIZ methodology involves the following steps (Souchkov, V., 2017): 1. situation analysis: defining problems and opportunities,

understanding the problem situation, documenting the problem, defining the solution criteria, requirements, constraints and goals; 2. problem analysis and decomposition: analysis of the causes and effects of the problem, decomposition of the general problem and creation of a map of subproblems to be addressed; 3. identification of the key issue or situation, that is, the key cause that needs to be eliminated, in order to achieve the expected results; 4. utilizing TRIZ techniques and tools for generating conceptual solutions; 5. creating a portfolio of ideas; 6. choosing the best solution.

By analysing the mentioned problem-solving methodologies, it can be established that all methodologies contain the following steps: 1. defining the problem, 2. determining the cause of the problem, 3. developing alternative solutions, 4. selecting the best solution, 5. implementing the chosen solution and 6. evaluating the outcome, i.e. measuring the effectiveness of the results. The listed steps in the problem-solving methodology are fully aligned with the philosophy of quality and the PDCA approach to continuous improvement.

DISCUSSION

Organizations today face the need for continuous improvement of the problem-solving competencies of their customers for several reasons. The first reason relates to intense market changes that influence or alter end-user attitudes. The second reason is associated with the intensive use of digital technologies in business, leading to the need for accelerated implementation in enterprises that seek to remain competitive in the market and successfully deliver quality customer experiences. Companies can solve problems successfully in two using various problem-solving methodologies (such as DMAIC, TRIZ, the 8D method, PDCA, the ASQ four-step model, etc.) and by implementing the international standard ISO 10002:2019. Through the application of problem-solving methodologies and ISO 10002, organizations aim to minimize or eliminate problems and improve processes to enhance their competitive advantage in the market and satisfy end-users. By applying ISO 10002:2019. organizations receive feedback from customers regarding the fulfilment of their expectations. Effectively addressing customer complaints management's demonstrates the executive readiness to identify and resolve complaints. The common steps of all the mentioned problemsolving models are also aligned with the complaint-handling methodology according to the ISO 10002 standard, because here the same goal is emphasized - continuous improvement, as a principle of quality management. This provides the answer to research question Q1 - How do problemsolving methodologies impact customer satisfaction?

The effective engagement of people, through a continuous process of their improvement and education, opens up the opportunity for them to express their creative and innovative potential. They can similarly utilize their abilities to achieve the organization's set goals (Cvjetković et al., 2021). The experiences of companies that managed to mitigate the effects of economic downturns during 2020 indicate the need for creative thinking in problem-solving, flexible market activities, effective human resource management, etc. (Bešić, et al., 2021).

Motivating employees in organizations activities aimed at developing problem-solving competencies poses a significant challenge for executive leadership. Global market changes indicate increasing needs for continuous employee development. Through acquired competencies, employees become capable of solving problems more effectively, ultimately leading to better customer experiences. However, employees still exhibit resistance towards acquiring problemsolving competencies for several reasons. Firstly, the intensive use of digital technologies in business has driven employees to focus on acquiring digital skills to retain their current positions. Secondly, there is insufficient awareness among employees about the benefits of acquiring problem-solving competencies. In this regard, greater engagement from executive leadership is necessary to introduce and explain to employees what problem-solving skills entail and how they can benefit the organization in meeting customer needs and creating quality customer experiences. Thirdly, organizational leaders themselves may lack awareness of the benefits of problem-solving competencies, focusing more on other areas. Such attitudes from executives can pose serious issues for organizations in meeting customer needs and improving business continuously processes. Moreover, if an organization has implemented any management system standards, acquiring and improving employee competencies is considered mandatory. Fourthly, young individuals encounter

limited opportunities to develop problem-solving skills during their formal education (primary, secondary, and tertiary education). This poses an additional challenge as they quickly enter the workforce as managers, and later, as leaders or owners of their own organizations. Based on the aforementioned points, we can regard this as the answer to the research question Q2 - To what extent are employees in organizations interested in engaging in activities aimed at developing problem-solving skills?

The common steps of different problem-solving models show that problem-solving, including customer complaints, requires an efficient and systematic approach, which enables identification and elimination of root causes of non-conformities, finding and applying the best solution, i.e. corrective measures for the identified non-conformity and monitoring the effectiveness of the measures taken and customer satisfaction, with the aim of continuous improvement of products and services, processes, systems and customer satisfaction. According to Bakator et al., (2019), customer satisfaction is a result of the integration of the best business practices, including high-quality products.

Successful organizations that place customer satisfaction at the centre of their strategy are aware that quick and efficient problem-solving is a prerequisite for success. Organizations that have aligned their operations with the requirements of international management system standards have the ability to obtain feedback from end-users regarding their satisfaction with the company's products or services. This is achieved through measuring customer satisfaction, enhancing employee competencies, and measuring and analyzing business processes. The feedback received from users forms the basis for creating strategies to solve problems, improve the customer experience, and enhance employee competencies. This leads to the answer to the research question O3 - Do organizations understand the end-users need for quick and efficient problem-solving?

CONCLUSION

Analysing different problem-solving methodologies, their common elements, i.e. steps, the goal of the ISO 9000 series of standards, including the standards from the ISO 10000 group that relate to customer satisfaction, especially considering the

importance of problem-solving competencies in today's business environment, when customer satisfaction and loyalty are primary tasks for manufacturers and service providers and a condition for survival on the market, similarities in approaches to problems can be observed – both in the problem-solving methodology and quality standard requirements. Namely, their goal is mutual, which is to improve the quality of products and services and customer satisfaction. In addition to a common goal, the following similarities should also be mentioned:

- 1. customer focus both methodologies have a strong focus on the customer needs and requirements. The problem-solving methodology is geared towards identifying issues that affect the customer experience, while the ISO 10002 standard sets guidelines for the effective management of customer complaints and feedback to improve customer satisfaction;
- 2. *system approach* both the problem-solving methodology and the ISO 10002 standard promote a system approach to problem-solving and continuous process improvement. Both approaches tackle problems using structured methods of analysis and resolution, as well as establishing systems for monitoring and measuring customer satisfaction;
- 3. *process orientation* both methodologies follow a process-oriented approach to problem-solving. The problem-solving methodology typically follows steps such as problem identification, root cause analysis, solution development and implementation, while the ISO 10002 methodology sets guidelines for managing the process of receiving, handling and resolving customer complaints;
- 4. *continuous improvement* both methodologies aim for continuous improvement with the problem-solving methodology involving the identification and resolution of problems to enhance the customer experience, while the ISO 10002 standard provides guidelines for monitoring and continuously improving the process of managing complaints and customer feedback.

Based on the discussed issues, it can be concluded that problem-solving competencies are key to quickly and efficiently overcoming challenges that affect customer satisfaction. Employees who possess problem-solving competencies can successfully identify problems, analyse their root causes and implement effective solutions, thereby

improving the quality of products and services, enhancing customer experiences, building trust with customers, increasing customer satisfaction and creating long-term relationships that are key to market success.

REFERENCES

- Abuhav, I., (2017). ISO 9001:2015— A Complete Guide to Quality Management Systems. CRC Press Taylor & Francis Group, 416.
 - https://doi.org/10.4324/9781315369808
- Almeida, R., Vaz, P., & Silva, R. (2021). Application of DMAIC methodology in a rubber component producing company, *Millenium*, 2(ed espec n°9), 325-337. https://doi.org/10.29352/mill029e.19188
- American Society for Quality -ASQ (2024). *Problem solving*. https://asq.org/quality-resources/problem-solving
- Arkeya, P. & Faruk, B.P. (2017). Problem Solving Approach. *International Journal of Advanced Engineering Research and Science*, 4(5), 184–189. https://doi.org/10.22161/ijaers.4.5.29
- Atuahene-Gima, K. & Wei, S. (2011). The vital role of problem-solving competence in new product success. *Journal of Product Innovation Management*, 28(1), 81-98. https://doi.org/10.1111/j.1540-5885.2010.00782.x
- Bakator M., Đorđević D., & Ćoćkalo D., (2019).

 Developing a model for improving business and competitiveness of domestic enterprises. *Journal of Engineering Management and Competitiveness* (*JEMC*), 9(2), 87-96.
 - https://doi.org/10.5937/jemc1902087B
- Banica, C. F., & Belu, N., (2019). Application of 8d methodology an effective problem solving tool in automotive industry. *Scientific bulletin Automotive series, XXV*(9), Faculty of Mechanics and Technology, University of Pitesti. https://doi.org/10.26825/bup.ar.2019.005
- Bešić C., Đorđević D., & Bešić S. (2022, mart).

 Neophodnost izmene poslovne filozofiuje preduzeća,

 XXI Međunarodna konferencija Utjecaj padndemije

 COVID 19 na globalizaciju i svetske ekonomske,

 pravne i medijske tokove sa osvrtom na zemlje Z.

 Balkana. Internacionalni univerzitet u Travniku,

 Travnik.
- Bogetić, S., & Antić, Z., (2023). *Integrisani* menadžment sistemi. BAPUSS, p. 23.
- Bransford, J., & Stein, B. S., (1984). The ideal problem solver: a guide for improving thinking, learning, and creativity (2nd ed), W.H. Freeman: New York, pp. 21
- Che Ani, M., N., Azid, I., A., & Shahrul, K. (2016).
 Solving Quality Issues in Automotive Component
 Manufacturing Environment by utilizing Six Sigma
 DMAIC Approach and Quality tools. *Proceedings of*the 2016 International Conference on Industrial

- Engineering and Operations Management Kuala Lumpur, Malaysia, March 8-10, pp. 1986-1997.
- Choudhar, S., Bi, N., Singh, P., N., & Talwar, P.(2022). Study on Problem Solving Skills and Its Importance. World Journal of English Language, 12(3). https://doi.org/10.5430/wjel.v12n3p47
- Csapó, B. & Funke, J. (2017). The development and assessment of problem solving in 21st century schools, In Csapó, B. & Funke, J., The Nature of Problem Solving: Using Research to Inspire 21st Century Learning, Paris: OECD Publishing. https://doi.org/10.1787/9789264273955-en
- Cvjetković M., Vasiljević M., Cvjetković M., Josimović M., (2021). The impact of quality on the improvement of business performance and customer satisfaction. Journal of Engineering Management and Competitiveness (JEMC), 11(1), 20-28. https://doi.org/10.5937/jemc2101020C
- Ekmekcia, I., & Nebati, E., E., (2019). Triz Methodology and Applications. Procedia Computer Science, 158, 303-315. https://doi.org/10.1016/j.procs.2019.09.056
- Elangovan, S., Jusoh, M., S., Muhd Yusuf, D., H., Ismail, M., S., H., & Din, M., S., (2021). 8D Problem Solving Methodology: Continuous Improvement in Automation Organization. ICMProTech 2021 Journal of Physics: Conference Series, 2129 (2021) 012017.
 - https://doi.org/10.1088/1742-6596/2129/1/012017
- Hutwelker, R. (2019) Six Sigma Green Belt Certification Project, Identification, Implementation and Evaluation. Springer, 89. https://doi.org/10.1007/978-3-030-31915-1 13
- Kapur, D. (2021). Up-grading Problem-Solving Skills: Indispensable in Providing Solutions to Different types of Problems. The Journal of Social Sciences Studies and Research, 1(04), 25-33. https://tjsssr.com/index.php/tjsssr/article/view/20
- Koc, E., Yurur, S., & Ozsahin, M. (2023). Problemsolving abilities of managers: inflated self-efficacy beliefs. Journal of Hospitality and Tourism Insights, 6(5), 2273-2297. https://doi.org/10.1108/JHTI-07-2022-0294
- Krajnc, M., (2012). With 8D method to excellent quality. Journal of Universal Excellence, Professional Article October, 1(3), 118–129.
- Kumar, S., Verma, M., Kr., & Dubey, D., (2023.) Methodology and Technique of 8D's to Solve the Problem. International Journal of Advanced Research in Science, Communication and *Technology (IJARSCT), 3*(1), 115-126. ISSN (Online) 2581-9429.
- Kurnia, H., Jagin, C., & Purba, H., H. (2022). Quality Improvement with the DMAIC Approach Using the Implementation of Benchmarking and KPI Methods. Proceedings of the Second Asia Pacific International Conference on Industrial Engineering and Operations Management, Surakarta, Indonesia, September 14-16, 2122-2133.

- Lee, J., Lim, Y., & Oh, H., I., (2018). Does customer satisfaction matter to managers' earnings forecasts and stock returns? European Journal of Marketing, 52(9/10), 2026-2051. https://doi.org/10.1108/EJM-06-2017-0422
- Marinova, D., Singh, S., K., & Singh, J. (2018). Frontline Problem-Solving Effectiveness: A Dynamic Analysis of Verbal and Nonverbal Cues, Journal of Marketing Research, LV, 178–192. https://doi.org/10.1509/jmr.15.0243
- Mbebeb, F. E. (2019). Rewarding Creative Problem Solving and Expectations for Creative Motives, Competence and Satisfaction of Workers During Critical Incidents. IAFOR Journal of Psychology & the Behavioral Sciences, Volume 5.
- Morgeson III F.V., G., Hult, M., Sharma, U. (2023). The American Customer Satisfaction Index (ACSI): A sample dataset and description. Data in Brief, 48, 109123. https://doi.org/10.1016/j.dib.2023.109123
- Rescalvo-Martin, E., Gutierrez-Gutierrez, L., & Llorens-Montes, F.J. (2022). The effect of paradoxical leadership on extra-role service in the hospitality industry. International Journal of Contemporary Hospitality Management, 33(10), 3661-3684. https://doi.org/10.1108/IJCHM-02-2021-0198
- Sabtu, S. H., Matore, M. E., & Maat, S. M. (2023). Five Spectacular of the Six Sigma DMAIC Model to Improve the Quality of Teacher Teaching in Schools: Revolution or Fantasy? International Journal of Academic Research in Progressive Education and Development, 12(2), 615–626. http://dx.doi.org/10.6007/IJARPED/v12-i2/16905
- Setyadi, T., Y., & Triyanto, M. (2019). Mathematical problem-solving skills using IDEAL model based on personality type. The 2nd International Conference on Science, Mathematics, Environment, and Education AIP Conf. Proc. 2194, 020115-1-020115-6. https://doi.org/10.1063/1.5139847
- Shankar, R. (2009) Process Improvement Using Six Sigma DMAIC guide. Milwaukee USA: ASQ **Quality Press**
- Sharif, M., Z., Lee, M., F., & Rahman, A., B., (2021). Critical Thinking and Problem Solving Skills Comprehension Level among Vocational Education Undergraduates. Studies of Applied Economics, Monografic Section, 39-10, October 2021. https://doi.org/10.25115/eea.v39i10.5627
- Smetkowska, M., Mrugalska, B. (2018). Using Six Sigma DMAIC to Improve the Quality of the Production Process: A Case Study. Procedia - Social and Behavioral Sciences, 238, pp. 590–596. https://doi.org/10.1016/j.sbspro.2018.04.039
- Souchkov, V., (2016). A brief history of TRIZ. ICG Training & Consulting
- Souchkov, V., (2017). Breakthrough thinking with TRIZ for business and management. ICG Training & Consulting
- Institut za standardizaciju Srbije ISS (2019). SRPS ISO 10002:2019 - Menadžment kvalitetom —

Zadovoljstvo korisnika — Smernice za postupanje sa prigovorima u organizacijama.

https://iss.rs/sr_Cyrl/project/show/iss:proj:69133

Institut za standardizaciju Srbije – ISS (2018). SRPS ISO 10004:2018 Menadžment kvalitetom – Zadovoljstvo korisnika – Uputstva za praćenja i merenja.

https://iss.rs/sr_Latn/project/show/iso:proj:71582

Institut za standardizaciju Srbije – ISS (2015a). SRPS ISO 9001:2015 Sistem menadžmenta kvalitetom – Zahtevi.

https://iss.rs/sr_Cyrl/project/show/iss:proj:48666

Institut za standardizaciju Srbije – ISS (2015b). SRPS ISO/IEC 17021-1:2015 Ocenjivanje usaglašenosti – Zahtevi za tela koja obavljaju proveru i sertifikaciju sistema menadžmenta.

https://iss.rs/sr Cyrl/project/show/iss:proj:51488

Tabancali, E., & Öngel, G. (2022). Examining the Relationship between High School Students'

Lifelong Learning Tendencies and Problem Solving Self-Appraisal. *The European Educational Researcher*, *5*(3), 297-312. https://doi.org/10.31757/euer.534

Vidas Bubanja M, Bogetić S., Bešić C., Kalinić Z., & Bubanja I. (2023). Managing the reskilling revolution for the digital age: case study-western Balkan countries, *Journal of Engineering Management and Competitivness (JEMC)*, 13(1), 37-52. https://doi.org/10.5937/JEMC2301037V

WEF (2023). The Future of Jobs Report.

https://www.weforum.org/publications/the-future-of-jobs-report-

2023/#:~:text=The%20Future%20of%20Jobs%20Report%202023%20explores%20how%20jobs%20and,the%20workplace%20of%20the%20future

ZNAČAJ KOMPETENCIJA ZA REŠAVANJE PROBLEMA U POSTIZANJU ZADOVOLJSTVA KORISNIKA

U savremenom poslovnom okruženju, u kom zadovoljstvo korisnika postaje faktor opstanka organizacija, kompetencije za rešavanje problema smatraju se esencijalnim, jer omogućavaju organizacijama da efikasno identifikuju, analiziraju i rešavaju probleme koji mogu uticati na korisničko iskustvo. Više nije dovoljno da zaposleni u direktnom kontaktu sa korisnicima budu samo ljubazni i uslužni, već je danas neophodno da brzo i efikasno odgovore na izazove koji utiču na zadovoljstvo korisnika. Kompetencije za rešavanje problema često se smatraju osnovnom veštinom neophodnom za uspeh u današnjem svetu, i od ključnog su značaja za sve poslovne aktivnost, a posebno u odnosima sa korisnicima. Uspešno rešavanje problema, pored osnovnog cilja – postizanja zadovoljstva korisnika, vodi i ka ispunjavanju principa i zahteva standarda kvaliteta koji se odnose na poboljšavanja, što rezultira boljim kvalitetom proizvoda i usluga, efikasnijim poslovnim procesima, većim poverenjem korisnika i unapređenoj poslovnoj reputaciji. Autori u ovom radu ukazuju na problem nedovoljne motivacije zaposlenih u oblasti razvoja kompetencija za rešavanje problema. Postoji nekliko razloga za ovakav odnos zaposlenih: ubrzani razvoj digitalnih tehnologija podstiče sticanje digitalnih veština; nedovoljno razvijena svest zaposlenih o prednostima sticanja kompetencija; nerazumevanje rukovodioca o prednostima kompetencija za rešavanje problema i mladi u sklopu svog formalnog obrazovanja se nedovoljno susreću sa mogućnostima za sticanje sposobnosti za rešavanje problema.

Ključne reči: Kompetencije, rešavanje problema, zadovoljstvo korisnika, ISO 10002,