

FUTURE TRENDS IN QUALITY MANAGEMENT

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Purpose: the article attempts to present topics related to quality management and systematize possible future trends in the area of the issue discussed. Moreover, the article indicates the best quality practices used in enterprises.

Design/methodology/approach: the presented considerations and the analysis carried out allowed for the identification of possible changes in the subject of quality management in organizations.

Findings: the article presents the essence of quality management and the most possible directions of changes in this area. Additionally, the article points to the importance of a comprehensive approach to quality management and attention to meeting all requirements set for the organization.

Practical implications: verification of good practices indicates the importance of quality methods used in both production and service organizations.

Originality/value: the information contained in the article shows the importance of quality as one of the most important factors in the competition of enterprises. Additionally, the article presents good practices used by companies recognizing the potential of quality, and also complements the literature on the presented topic.

Keywords: quality management, trends in management, competitiveness of the organization.

Category of the paper: research and review publication.

1. Introduction

The success of the company is largely dependent on the implementation and maintenance of methods for continuous improvement of the organization, and thus the quality management system and taking into account the requirements and needs of interested parties. Thanks to the appropriate level of quality, the company is able to acquire new customers, expand its operations to new markets, create an appropriate working environment and build an appropriate culture.

High-quality activities, processes, products and services have a real impact on the organization's profits, employee motivation and loyalty, repeat transactions, improvement of the organization's reputation and market share. The Italian fashion house Gucci very convincingly points out the importance of quality, stating that "Quality is remembered much longer than price". Quality is a determinant of the repeatability of concluded transactions. The buyer will remember the quality of service and the quality of a given product much more because it will serve him for a longer period of time, than the price of the product, which will be forgotten during the life of the product anyway. The universality of the quote means that it can be applied to various organizations operating in different industries. Excellent quality will always attract customers and allow you to conquer new markets, while ensuring the attractiveness products and the ability to meet customer expectations.

Unfortunately, production and service companies very often face the challenge of meeting increasingly sophisticated customer requirements, changing legal regulations and the tightening and specific requirements of the European Union regarding the functioning of organizations and their standards. Therefore, in order to achieve success, enterprises should implement management systems and combine them to create integrated management systems, as this ensures smooth operation and increases the prestige of the organization. The most frequently combined systems include (Wysokińska-Senkus, Wyrębek, 2011):

- quality management system,
- occupational health and safety management system,
- environmental management system

systems that take into account other important aspects of the organization (e.g. information security system, supply chain, project management, etc.).

ISO certificates (International Organization for Standardization, from the Greek *isos*, meaning equality) very often shape companies and increase trust in the services they provide or the products they create. Additionally, they confirm the high quality of the activities carried out. Often, the very introduction of a product to the market involves the need to obtain appropriate certificates confirming quality and guaranteeing safety of use.

It is also worth noting that certificates are not always only a necessity resulting from current regulations, they are also about building the company's image and an effective way of managing the brand and image of the company. The customer evaluates the organization through the prism of product quality; if it is confirmed by a certificate, it influences the repeatability of purchases, which means that the entrepreneur can use this advantage for promotional activities.

1. Management by quality

There are many elements influencing the creation of quality, but the basic one includes defining the scope of the quality management system. A quality management system is understood as an ordered set of elements, procedures and management rules (Krzyżanowski, 1992), as well as activities focused on the organization's environment (both closer and further).

Analyzing the definition of management itself, it is considered that it is the process of planning, organizing, leading and controlling all elements involved in its implementation, using the available resources of the organization in the most effective way (Robbins, DeCenzo, 2002).

Quality, in turn, in the philosophical approach created by Plato, is "a certain degree of perfection". Taking into account the time when the definition was created, i.e. 5th-4th century BC. and the author, who was one of the most important thinkers in the entire Western intellectual tradition, the importance of the concept of quality and its universality and multi-aspect nature should be recognized.

Quality management according to the international standard PN EN ISO 9000:2015, containing terminology and basic issues related to quality management systems, is defined as an approach aimed at improving the efficiency and flexibility of the organization in order to meet the requirements, needs and expectations of the customer. Management functions are implemented in the aspect of quality, where all activities contribute to meeting quality requirements (Hamrol, 2005).

It is worth noting that the basis for the implementation of the contents indicated above is also the continuous improvement of the organization and the increase in the efficiency and effectiveness of the undertaken activities (Prussak, 2003).

Quality management is a concept that can be considered from three perspectives:

- philosophical,
- normative,
- systemic.

The philosophical approach itself presents the beginnings of creating a definition of quality in relation to a product or service, but attention should also be paid to the implementation of the quality philosophy into specific activities of the organization. To produce a high-quality product, it is necessary to involve the entire organization, i.e. create and shape pro-quality attitudes and build an organizational culture based on quality, i.e. one that will be visible and present in all processes.

Organizational culture is identified with social norms and value systems that are designed to stimulate employees. It is also an appropriate management method, appropriate organizational climate, behavioral requirements, cognitive patterns, and characteristic symbols and shared meanings (Nogalski, 1998). Implementing the quality management philosophy is nothing more than using appropriate management instruments, i.e. the organizational culture

used in quality improvement. Quality is a basic element of the implementation of the organization's strategy and the quality goals it creates during the implementation of operational, tactical and strategic activities. Quality activates the organization to implement its mission and brings it closer to achieving the vision. Quality should therefore be included in the mission and vision of the organization, it should constitute a value in itself, in all activities that the organization implements. Bardzo istotny jest także zakres organizacji.

Thanks to the knowledge of the requirements and expectations of stakeholders, the organization will be able to meet them, while determining the scope of its activities and the scope of responsibilities for individual employees. This is somehow related to the principles of quality management, and specifically to the principle of the process approach, where the organization (employees) must know the requirements of the environment and then implement activities based on these requirements.

Also important is a risk-based approach, which indicates continuous improvement of the organization by preventing defects and introducing preventive and/or corrective actions. In addition, the leadership of the organization, i.e. top management, is of great importance because quality must be included in the organization's activities carried out not only at the operational level, but above all at the management level. This provides the organization with the opportunity to implement a holistic approach to quality-related issues.

Quality management according to the international standard PN EN ISO 9000:2015 is an approach that strives for continuous improvement, both in the area of flexibility and organizational effectiveness, in order to meet the already mentioned needs and expectations of customers. Achieving the indicated guidelines is possible by meeting all quality requirements, i.e. implementing the principles of quality management (PN-EN ISO 9000:2015):

- customer orientation,
- leadership,
- employee involvement,
- process approach,
- continuous improvement,
- making decisions based on facts,
- relationship management.

Customer orientation - organizations are dependent on their customers, therefore they should understand and be able to verify current and future needs, meet the requirements and exceed the expectations of the organization's customers and try to be flexible to be able to function in an unpredictable future. By implementing this principle, the organization can obtain many benefits, e.g.:

- increased customer trust resulting from repeatability of actions,
- increased efficiency affecting the optimal use of all organizational resources,
- increase in customer satisfaction,

- increase in profits and market share,
- flexible and quick response to market opportunities.

Leadership – the organization's management creates and ensures the proper functioning of the organization's internal environment. A company that respects the leadership principle builds an environment in which employees are involved in achieving the organization's goals and can present and implement their own ideas. The role of management is therefore to determine the methods by which it will be possible to achieve the set goals. The management is obliged to increase the involvement of the organization's employees, to properly present the vision, mission, strategy, policies, procedures, appropriate motivation, use of employees' skills, support their development and expand competences. Leadership in an organization that creates quality must be ready to delegate tasks and authorities, and additionally must be open to employees' suggestions and ideas that influence quality. The benefits of implementing the principle include:

- minimizing disruptions in communication and implementation of activities between individual departments,
- awareness of the organization's goals by its employees,
- increased employee motivation,
- universality of the implemented processes and unification of control, monitoring and evaluation methods.

People's involvement – people are the basis for the functioning of the organization. An organization is about people and their involvement in the processes being implemented. Therefore, quality creation takes place with the participation of the organization's employees. This is one of the most important principles of quality management, because commitment makes it possible to use the organization's potential, skills and competences of employees in order to achieve benefits. The potential benefits of the indicated principle include, for example:

- employee loyalty,
- increased innovation and creativity influencing the development of the organization,
- increase in employee responsibility,
- continuous improvement resulting from employee activation.

Process approach - the intended results are achieved much more efficiently when the organization's activities are managed as a process (a set of interrelated activities, the implementation of which is necessary to obtain a specific result) (Bugdol, 2016). With optimal use of necessary resources. Benefits include:

- cost reduction resulting from shorter project implementation time,
- effective use of resources,
- ability to influence results,
- increased probability of predicting results,
- concentration on opportunities for improvement.

Continuous improvement - the organization should constantly improve itself by conducting holistic quality improvement activities. Potential benefits include, for example:

- increase in competitive advantage,
- increase in the number of organizational possibilities,
- ability to respond to emerging opportunities and/or risks,
- balance of quality improvement at all levels of the organization.

Fact-based decision making – the most effective decisions are made based on the analysis of data and information. The organization constantly learns not to make the same mistakes when creating appropriate reports. Additionally, risk analysis is very important here, taking into account potential risks for the organization based on strengths and weaknesses and their proper verification. Examples of benefits of respecting the principle include:

- increased ability to analyze relevant documents,
- the ability to change decisions based on appropriate analyses,
- increased ability to present the effectiveness of previous decisions by referring to current records,
- communicating decisions.

Relationship management, also called mutual beneficial relationships with suppliers in the previous version of the standard - the organization and its suppliers and other stakeholders create values that are dependent on appropriate, profitable cooperation. The most important benefits are, for example:

- increased opportunities to create value for both parties involved,
- ability to quickly respond to market changes,
- efficient adaptation to customer needs and expectations.

The primary task of quality management is the continuous improvement of the organization, while taking into account all the principles described. Respecting the requirements will affect the effectiveness of all activities undertaken by the organization and increase its efficiency (Prussak, 2003).

2. The importance of quality management in modern organization

The quality management system (QMS), like other management systems, should be based on the PDCA model (Figure 1).

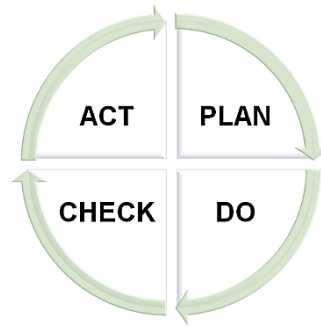


Figure 1. PDCA model.

Source: own study.

In relation to the QMS, it is recognized that it is necessary to take into account the customer's requirements and then implement the indicated process, including the role of supporting operational activities, planning, improvement and evaluation of performance effects. While emphasizing the role of leadership. The leader in the organization should be a leader involved in the implementation of pro-quality activities. A leader who will be able to overcome the resistance of employees, employees who do not see the need to introduce changes. Leader should inspire, encourage action and provide people with the appropriate amount of resources, training and authority to perform their tasks responsibly.

Additionally, at the exit from the process, customer satisfaction should also be taken into account by measuring it appropriately. Customer satisfaction determines the direction of the organization's activities and builds the loyalty of the recipient of the product or service towards the company (Figure 2).

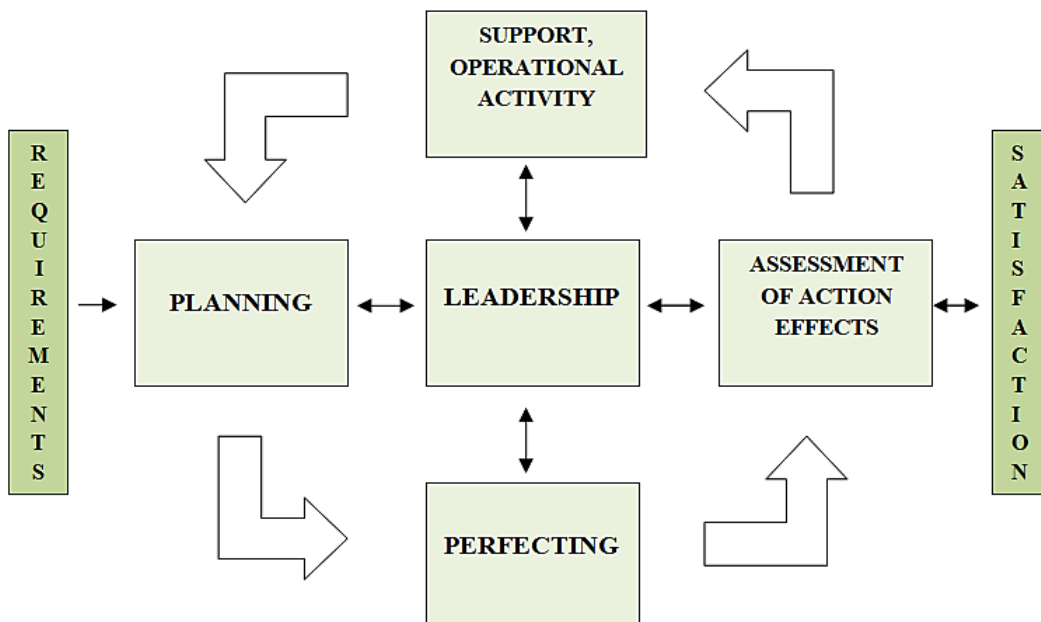


Figure 2. PDCA model used in QMS processes.

Source: own study based on ISO 9001:2015.

From the point of view of the standard, awareness of requirements and effective assessment of the company's quality are also important. All employees of the organization, especially those directly responsible for quality, should be properly prepared to conduct quality assessment. These activities should be as conscious as possible and based on appropriate measures. Thanks to the appropriate level of quality, the company is able to acquire new customers, expand its operations to new markets, create an appropriate working environment and build an appropriate culture. Direct measurement of quality in a competitive approach is not possible due to the diversity of organizational goals. However, relative measurement can be made using qualitative (descriptive) and quantitative (statistical) methods.

Additionally, the assessment should refer to the organization's conditions, its functioning and legal requirements specific to a given industry. The quality management system is often assessed by an internal or external auditor who is not part of the organization. This assessment should be as objective and reliable as possible, not containing subjective opinions. However, it should be remembered that the evaluation of an employee of an organization may very often depend on his/her involvement, attitude, knowledge, competences and awareness, e.g. of the lack of quality in the activities carried out and the consequences resulting from it. The conditions prevailing in the organization and the already mentioned organizational culture (ISO 9001:2015) are also important.

Organizations are increasingly implementing management systems and integrated management systems, and thus the number of certificates awarded is increasing. This proves the awareness of enterprises, stakeholders, building relationships and legal conditions and the willingness to expand sales markets (Figure 3).

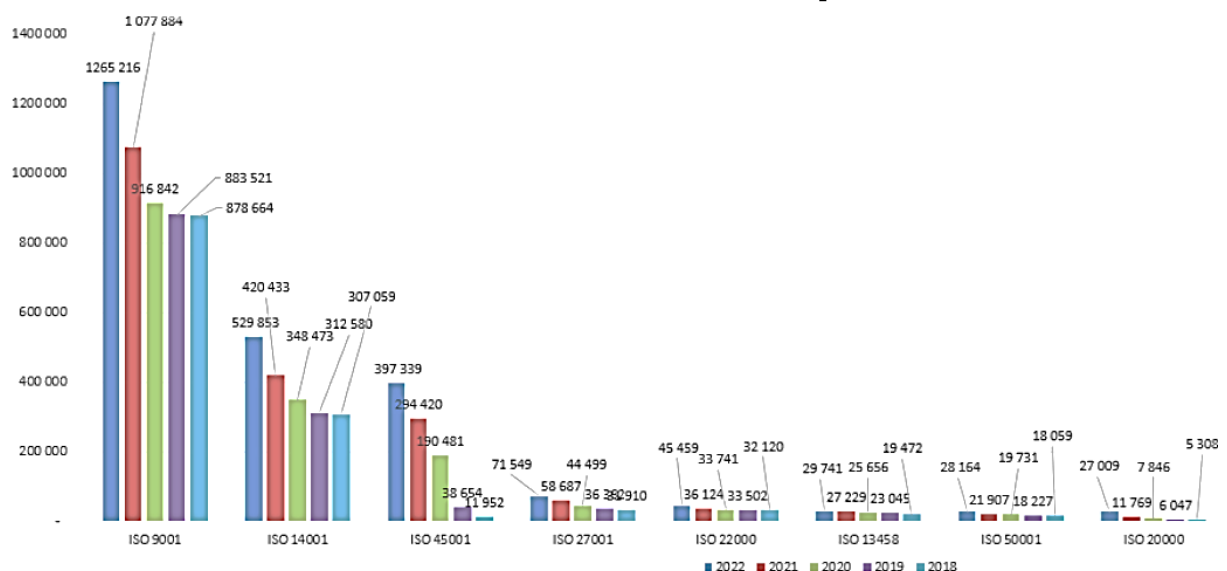


Figure 3. Number of certificates 2018-2022.

Source: Sawicka, 2024, based on ISO Survey.

The largest share of certificates awarded still goes to the quality management system. Regardless of the industry and the nature of operation, organizations must adapt to the guidelines contained in specific operating standards. This applies to both manufacturing and service enterprises. The next standard according to the number of certificates granted is environmental management. Taking into account the above-mentioned outputs from the organization's activities, in addition to satisfaction and finished products, the organization creates waste or defective products. That is why efficient and effective environmental management is so important in order to limit the negative impact on the environment.

Organizations are increasingly becoming more aware of their actions, ensuring the security of products and services. A satisfactory number of certificates awarded under the ISO 45001 standard proves the importance of building the company's image through the prism of corporate social responsibility (CSR) and sustainable development goals, thus drawing attention to ethical behavior towards employees and, above all, to the safety of activities carried out within the organization. All regulations, also depending on the industry, should be respected by everyone from the immediate and distant environment of the organization.

It is also worth paying attention to the growing position of another standard related to the information security management system. The introduction of the EU regulation, drawing attention to the importance of transmitted information and data, and tightening administrative and financial penalties have resulted in organizations also trying to obtain a certificate confirming their appropriate approach to the indicated area in this respect. There are many motivations for implementing management systems and each organization should identify them independently. Some motivating factors are, for example (Wysokińska-Senkus, 2007):

- employment stability,
- job satisfaction,
- remuneration,
- work atmosphere,
- working time,
- professional development,
- work organization,
- new challenges,
- use of abilities,
- prestige.

The situation is similar with internal and external benefits for the organization in connection with the implemented system. It is also important to remember that in addition to the certifications mentioned, there are also other industry standards.

The internal benefits resulting from the implementation of a quality management system include (Kaczmarska, 2011):

- increased employee involvement when performing assigned tasks, at all levels of the organization,
- improvement of the decision-making system,
- increase in the speed of information flow,
- systematization of main, management and auxiliary processes,
- increase in work efficiency,
- reducing operating costs,
- improving process management in the organization, and thus increasing the diversity of production,
- increase in the profitability of the organization,
- improving the repeatability of products, reducing the number of complaints,
- establishing clear and transparent procedures as well as duties and powers of organizational units,
- increase in the speed of identifying the needs of organizational units,
- faster identification of threats and their effects,
- possibility of risk management,
- increase in the effectiveness of achieving the organization's goals,
- introducing the possibility of training for employees, assessing the effectiveness of these trainings and periodic employee evaluation,
- improvement of internal communication,
- shaping a quality culture,
- increased motivation to improve the organization,
- monitoring the timeliness of implemented activities,
- clear division of competences and responsibilities,
- ease of onboarding newly hired employees.

External benefits include (Kaczmarska, 2011):

- improving the image of the organization,
- increased credibility of the organization,
- increase in international transactions concluded,
- improving the organization's communication with its stakeholders,
- systematizing the method of confirming and executing orders,
- increase in the competitiveness of the organization,
- the ability to compare yourself with other organizations and approach the leadership position in a given industry,
- implementation of service standards at the European level,

- increase in customer satisfaction,
- increasing operational efficiency, with lower own costs.

Presenting the potential benefits of a QMS is important at the stage of making decisions about implementation. There are also situations in which an organization's clients demand that it obtain a certificate. Additionally, organizations may decide to implement a quality management system through the prism of the above-mentioned promotion of the organization or the possibility of identifying with competitors that have a given certificate. The rationale for implementation may also be solely to improve the organization's activities.

By improving its operations, the organization has the opportunity to recruit employees with the highest possible competences who are motivated to take up a given job by the factors presented above. Therefore, organizations also compete with each other on the level of employee gratification and benefits provided to them. However, building the company's potential is based primarily on the above-mentioned employee competences, and in the case of quality, this concerns its awareness, sustainable IT (information technologies) and new generation technologies.

3. Radical quality improvement – future trends

The problem of quality management is constantly evolving. There may be many reasons for this phenomenon, but the factors presented below can be considered the most important trends in quality management (Sawicka, 2024).

- Social requirements, i.e. customer expectations, consumers increasingly expect that entrepreneurs will completely understand their needs and exceed them, as a result of which new products or services will be created that will be able to fit the sophisticated tastes of users. Additionally, customers also expect personalized products or services that will meet sustainable development goals, be of high quality and quickly delivered, and additionally be safe in use and ensure digital security related to the flow of personal data.
- Technological factors and information technologies enable quick execution of customer orders and effective operation of the organization by streamlining processes. Proper data analysis enables continuous improvement of the organization as well as digital strengthening and better quality management, affecting stakeholder trust.
- Economic factors related to the supply chain. Future trends related to this aspect will increase the importance of new strategies and/or processes, due to constantly emerging or escalating threats in the supply chain. These threats mainly concern cybersecurity, but also the increase in the costs of raw materials, lack of process efficiency and changing consumer demand.

- Environmental factors, increasing awareness of the importance of the environment, tightening legal regulations and the emergence of new threats mean that organizations must resist the growing pressure to demonstrate climate action. Thus, undertaking corporate social responsibility (CSR) initiatives, the already mentioned sustainable development and the idea of ESG, i.e. a management method that takes into account the environment, social responsibility and corporate governance.

Additionally, organizations are successively obliged to comply with the CSRD (Corporate Sustainability Reporting Directive), i.e. Directive (EU) 2022/2464 of the European Parliament and of the Council of December 14, 2022 relating to the reporting principles of enterprises in the field of sustainable development. The main challenges related to the CSRD are (CSRD, 2022):

- business strategy that takes into account risks and opportunities related to sustainable development,
- determining the organization's impact on the environment and society,
- decision-making processes taking into account the most important non-financial factors affecting the financial result of the organization,
- obtaining, storing and analyzing data regarding activities taking into account the sustainable development of the organization (this data must be as true and reliable as possible),
- continuous improvement of the organization and introduction of changes, starting from the management level.

The awareness of the quality of modern organizations is increasing and thanks to this, organizations are able to achieve perfection in their structures, and thanks to the use of information technology, they become more efficient and implement new ideas. It seems that the future of quality-managed organizations will continue to improve activities in this area, and additionally take care of the environment, implement ESG goals and create even more excellent products and increasingly comprehensive services.

The important competences of the future look similar. Research conducted by the Mobile Institute in 2022 among participants of training in the field of development forms of the future (HR specialists) indicates that the most popular form of competences of the future will be the development of soft competences related to psychosocial skills (32%), innovations in business (28%) and learning foreign languages (26%) (Figure 4).

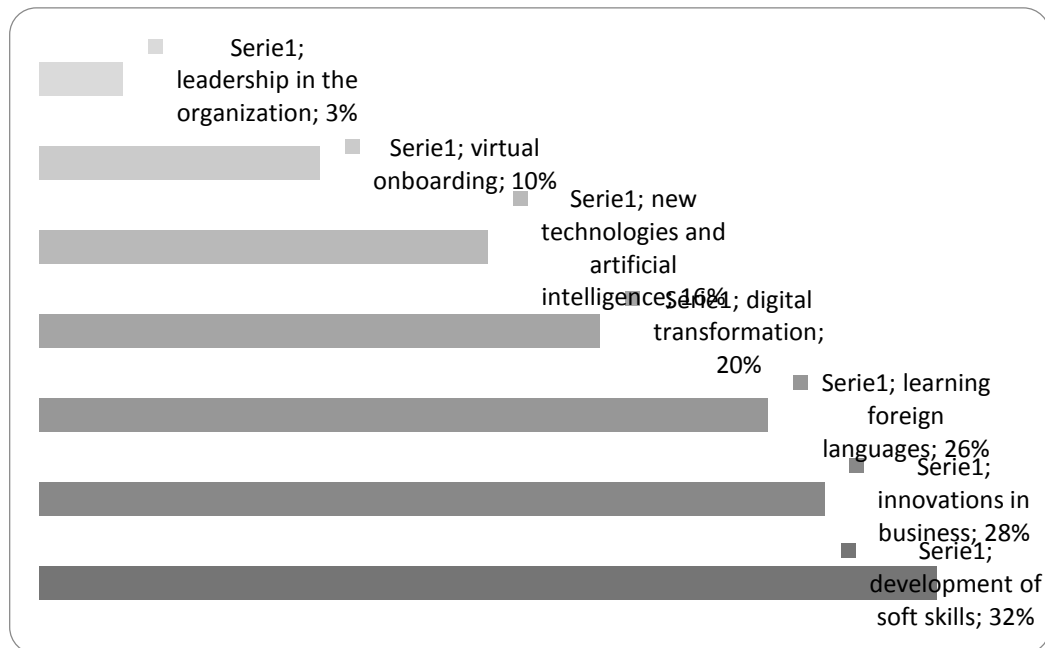


Figure 3. Area of employee competence development.

Source: own study based on <https://nowemotywacje.pl/formy-rozwojowe-przyszlosci/>, 15.06.2024.

Robotics, automation and artificial intelligence (AI), influencing machine learning algorithms and using cloud computing, the Internet of Things and large data sets, also seem to be very important from the point of view of future competences.

Toyota Logistics & Forklift (TL&F) experienced an appreciation of the potential of quality, and therefore a spectacular improvement in the functioning of the organization.

Despite achieving satisfactory results, the organization decided that it should improve the quality of its branches around the world. The introduced improvement actions turned out to be so effective that the company also implemented them in its parent plants in Japan. Quality improvement in an organization that has long been known for high-quality products was defined by the Japanese word *dantotsu*, meaning radical, extreme, or unparalleled. Continuous improvement and attention to the highest quality have caused many other organizations to implement the above-mentioned improvement activities also in their own enterprises (Zawierucha-Kozłowska, 2024).

The book describing Toyota's path to perfection was published in many languages, and the method of reducing quality defects to zero was used in plants in Japan, the USA and Sweden. Additionally, the international software company Theodo introduced Sadao Nomura's method for creating software and also achieved a huge leap in quality, which is why consider this method to be one of the most effective in achieving radical quality.

It is also worth paying attention to other companies from various industries, e.g. Iglotex, the already mentioned Gucci, or Audi. Quality will always constitute a competitive advantage, therefore organizations should take into account the principles of quality management as well as social and environmental aspects in their activities, because future management trends still point to continuous quality improvement.

4. Summary

Quality improvement is one of the measures of success in business, and quality management should be considered a managerial function responsible for all aspects related to the quality of products or services. Enterprises are constantly competing in implementing innovations that shorten processes, reduce costs and improve quality, which constitutes a competitive advantage or is an inherent element of the proper functioning of the organization. Additionally, the proper quality of products often also involves changing legal regulations and the obligation arising from the proper running of a business.

Trends in quality management clearly indicate that the future will be dominated by soft skills, environmental aspects, new technologies and artificial intelligence. Good practices, however, show great potential for reducing defects and achieving spectacular quality. Companies that decided to recognize the potential of quality are extremely successful on international markets.

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