

## THE IMPORTANCE OF LEADERSHIP IN ISO 22000:2018 COMPLIANT FOOD SAFETY MANAGEMENT SYSTEMS

**Agata Szkiel**

Gdynia Maritime University, Faculty of Management and Quality Science, 81-87 Morska St., 81-225 Gdynia, Poland, ORCID 0000-0001-8004-32274, email: a.szkiel@wznj.umg.edu.pl

**Abstract:** One of the main factors determining the effectiveness of food safety management systems (FSMSs) implemented in organizations operating in the food chain is the leadership and commitment of management at every level of the organisation's structure. The article presents the importance of leadership for maintaining and improving the effectiveness of the system and creating a positive food safety culture. The requirements of ISO 22000:2018 relating to the tasks and responsibilities of managers of FSMSs and the principles of leadership assessment as part of system audits conducted by the certification body are also discussed. The article also proposes criteria and metrics that can be used by managers of organisations with FSMSs to assess their leadership and commitment to maintaining and improving the system.

**Keywords:** food safety management system, leadership, ISO 22000, food safety culture.

### 1. INTRODUCTION

The primary responsibility of organisations operating in the food chain is to ensure safety of the food produced and marketed. Commission Regulation (EU) 2021/382 of 3 March 2021 [Commission Regulation (EU) 2021/382] requires these organisations to implement a food safety culture aimed at ensuring the safety of the food products they produce by raising awareness and improving the behaviour of the organisation's personnel. A positive food safety culture enables the organisation to improve its performance in the field of food safety and to achieve its objectives. Therefore, it is one of the main factors determining the competitiveness of organisations in the food chain [Oberst 2021].

When building and developing a food safety culture, organisations can build on the requirements set out in Commission Regulation (EU) 2021/382 or use a food safety management system (FSMS) based on the requirements of ISO 22000:2018. It is a system that enables managers to integrate food safety measures into all organisational management activities and link the FSMS to the everyday life of the

organisation, its business goals and the requirements of the environment in which it operates, which is a source of both threats and opportunities.

The attitude and commitment of the management has a significant impact on the behaviour of employees related to ensuring food safety and, thus, on the culture of food safety of the organisation [Sharman, Wallace and Jespersen 2020]. Research on the effectiveness of the FSMS shows that management involvement is one of the most important factors, and lack of leadership, along with lack of financial resources, low staff awareness or inadequate infrastructure, is one of the main barriers to the implementation of an effective FSMS [Monge-Mora et al. 2020; Purwanto, Hutagalung and Yanthy 2020]. Therefore, one of the assumptions of the ISO 22000:2018 standard is that an integral element of an effective and constantly developed FSMS is a food safety culture based on the leadership from the management and the involvement of all the organisation's personnel in activities designed to ensure food safety. In the FSMS model, leadership is described as one of the 7 management principles on which the system should be based. In addition, one of the chapters of the ISO 22000:2018 standard is devoted to it, in which the tasks of the management related to the implementation, maintenance and improvement of the system are defined.

The aims of the article are to present the requirements of ISO 22000:2018 regarding management responsibility; to present the principles of leadership assessment as part of external FSMS audits conducted by certification bodies, and to suggest criteria and measures that can be used by organisations with the relevant FSMSs to assess leadership and the management's commitment to maintaining and improving their systems.

## **2. LEADERSHIP AS A DETERMINANT OF THE EFFECTIVENESS OF A FOOD SAFETY MANAGEMENT SYSTEM**

In literature devoted to the issues of organisation management, various definitions of leadership are presented. For example, according to Griffin, leadership should be understood as the use of influence, without resorting to coercive measures, with the intention of shaping the goals of a group or organisation, motivating behaviour aimed at achieving those goals and helping to define the culture of the group or organisation [Griffin 2017]. Stoner, Freeman, and Gilbert define leadership as the process of directing and influencing group activities related to the group's tasks [Stoner, Freeman and Gilbert 1998]. According to Wolniak, leadership is the ability to influence a group in pursuit of specific goals, or such behaviour that turns a vision into real actions [Wolniak 2012].

The internationally recognised model of organisational excellence developed by the European Foundation for Quality Management (EFQM), which is aimed at supporting organisations in managing change and improving performance, assumes

that leadership aims to inspire and motivate members of the organisation and define organisational values and norms that are supposed to support the building of organisational culture. According to the EFQM model, leadership refers to the organisation as a whole and should be visible at all levels of the organisation [The European Foundation for Quality Management 2021]. Most definitions therefore associate leadership with the goals of the organisation and ways to achieve them. Therefore, the important feature of a leader is the ability to formulate the vision and mission of the organisation, business goals and the ability to shape the organisation's culture [Bugdol and Jedynek 2012; Szczepańska 2013].

Leadership, most often identified with the attitude of the management at each level, is an inseparable element of the management of any organisation; it determines the effectiveness of this management and, in turn, the market success of organisations operating in a competitive and constantly changing environment. The success of the organisation depends on the correlation between management and leadership, because leadership is a prerequisite for change, and management is a means of achieving the desired results [Szczepańska 2013; Griffin 2017]. Leaders define the organisation's goals, suggest a vision, develop a strategy and allocate the necessary resources to achieve the goals set within the organisation [Książek and Ligarski 2015].

Leadership is also an important element of standardised management systems built on the basis of the requirements of ISO standards, which support organisations in achieving goals in various areas, including quality (ISO 9001:2015), environmental protection (ISO 14001:2015), occupational health and safety (ISO 45001:2018), information security (ISO 27001:2022) or food safety (ISO 22000:2018). The importance of leadership in ensuring the effectiveness of a standardised management system is demonstrated by the fact that it has been given the status of one of the 7 management principles on which every such system should be based.

According to this principle, leaders at all levels of the organisational structure should establish a unity of purpose and a direction for action and create conditions in which people are involved in achieving the organisation's goals [International Organisation for Standardisation 2015a]. This approach is consistent with the definition of leadership presented in the literature on the subject, linking it with the achievement of goals. The description of the principle shows that leadership is to ensure influence on the behaviour of personnel, requires the establishment of an appropriate social system of the organisation and refers to both strategic and operational planning, so it applies to management at every level of the organisational structure. The unity of purpose and the direction of the organisation's work is expressed in the vision, mission and strategy between which there should be mutual relations [Wolniak 2012; Szczepańska 2013].

Applying the leadership principle enables the organisation to improve its financial and market performance (for example, increasing competitiveness,

acquiring and retaining customers). It also contributes to improving the management of the organisation, including improving the effectiveness of decision-making, optimal use of available resources, increasing employee responsibility, and improving the effectiveness and efficiency of processes [Szczepańska 2013].

The absence of proper leadership and consequent lack of employee motivation are two of the most important obstacles in the process of implementing pro-quality concepts of managing organisations, including FSMSs [Wolniak 2012; Hawrysz 2014; Goffnett 2020]. The results of research on the role of managers in FSMSs suggest that the style of leadership is one of the most important factors determining the effectiveness of the system and enabling the improvement of results achieved so far in the field of food safety [Manning 2017; Purwanto, Hutagalung and Yanthy 2020]. From the point of view of pro-quality management of the organisation (based on the involvement of all staff), the classic approach to leadership (based on the dominance of the individual, issuing orders and controlling their execution), as well as the transactional approach (based on cooperation between the leader and subordinates in order to achieve mutual benefits, influencing subordinates through the use of rewards, implementation of contracts and meeting expectations) are not appropriate [Szczepańska 2013].

Instead, participatory and transformational leadership is becoming increasingly important. Participatory leadership is aimed at improving the functioning of the organisation, using teamwork, motivating employees and including them in the process of solving organisational problems and making decisions [Wolniak 2012]. Transformational leadership, on the other hand, is based on the premise that the leader's vision inspires their subordinates to make an effort to achieve the organisation's goals. This type of leadership is based on shared values, a sense of belonging to the organisation, cooperation of team members, minimal control and motivating employees to develop personally and professionally [Szczepańska 2013; Patejczyk and Kobos 2022].

Research on the relationship between the management style and effectiveness of the FSMS shows that transformational leadership has the greatest positive impact on system performance, employee satisfaction and building the food safety culture, based on creating a collaborative relationship between management and staff, motivating and inspiring staff to achieve extraordinary results, group identification of system elements that need improvement, and developing a vision that enables effective change management. Transformative food safety management encourages everyone working in the organisation, regardless of their role, to recognise that their permanent task is to maintain the safety of the food they produce [Manning 2017]. In turn, transactional leadership, which focuses mainly on supervision and performance through the use of rewards and penalties, is more effective in crisis or emergency situations, including those related to product recalls [Odumeru and Ogbonna 2013; Monge-Mora et al. 2020].

In an effective FSMS, the management should shape patterns supporting activities aimed at ensuring food safety. In a normative perspective, the determinants of leadership are:

- the organisation's food safety policy followed by all employees under the leadership of the management, as the basis for focusing all activities on product safety, covering all areas affecting safety;
- the food safety objectives defined for the different levels and functions of the organisation;
- procedures defining the means of applying measures that affect food safety;
- assigning responsibility for the performance of activities affecting food safety, maintenance and improvement of the system, as well as ensuring necessary competences;
- process environment enabling the performance of procedures and achievement of the food safety goals [Szczepańska 2013].

Effective communication within the organisation is also an expression of leadership, ensuring that the FSMS is understood by everyone, applied in practice and everyone is involved in its improvement.

Leadership and commitment of the management enables the establishment of a positive organisational culture defined as a set of important concepts, such as norms, values, attitudes, and beliefs, common to the members of the organisation [Stoner, Freeman and Gilbert 2018]. An integral part of the organisational culture is a food safety culture that focuses on food safety and should be the dominant culture in organisations operating as part of food chains [Chernyszewicz 2020; Kwiatek and Patyra 2021]. Food safety culture is a term strongly related to one of the principles of quality management, which is leadership [Walaszczyk and Mnich 2021]. Without leadership, it is not possible to develop an organisational culture as one is directly related to the other [Szczepańska 2013]. The maintenance and development of a food safety culture is fundamental to the effectiveness of any FSMS, due to its significant impact on staff attitudes and behaviour in respect of food safety matters [Chernyszewicz 2020; Wiśniewska and Kowalska 2022].

The definitions of food safety culture presented in the literature explain this concept in a similar way. Sharman, Wallace and Jespersen (2020) define a food safety culture as an organisation-level structure that addresses deeply held beliefs, behaviour, and assumptions which are assimilated and shared by all employees and which impact food safety within the organisation [Sharman, Wallace and Jespersen 2020]. According to Yiannas (2008), food safety culture can generally be defined as the organisation's approach to food safety. It is a product of individual and group values, beliefs and standards that influence the way we think and behave towards food safety [Yiannas 2008].

A proper food safety culture assumes that food safety is the foundation of the company's management directions. They are reflected in the organisation's strategy and food safety standards necessary for its operationalisation.

According to Commission Regulation (EU) 2021/382, the food safety culture consists of:

- leadership and involvement of all employees in the production and distribution of safe food;
- adherence to good food safety practices;
- awareness of food safety risks;
- open and clear communication between employees of the organisation;
- availability of sufficient resources to ensure food safety [Commission Regulation (EU) 2021/382].

Next, in the field of the food safety management system, the organisational culture should include the following ingredients:

- informing all employees in a clear and consistent manner about food safety policies and responsibilities so that everyone understands the practices of the organisation and the general approach to food safety;
- division of responsibilities and powers related to the maintenance and improvement of the system;
- maintaining integrity of the food hygiene system during the planning and implementation of changes in the system;
- ensuring that the system documentation is up to date;
- providing training and defining rules for the supervision of personnel;
- ensuring compliance of the organisation's activities with the food law;
- inviting feedback from employees on food safety issues;
- measuring effectiveness of measures related to ensuring food safety;
- taking into account scientific and technological progress and best practices for improvement of the system [IFS Management GmbH 2020; Commission Regulation (EU) 2021/382].

The absolute baseline of a food safety culture is therefore the awareness of every employee of the organisation that their work has a direct effect on the health and safety of other people [Walaszczyk and Mnich 2021]. Managers should try to influence this awareness through visible commitment and leadership, setting an example, creating a vision, setting goals and setting clear standards and rules of conduct for food safety and its improvement [Wiśniewska, Malinowska and Piekarska 2018].

The results of the research confirm the positive relationship between leadership and the safety performance of organisations (in various aspects) by reducing incident and accident rates, creating a good safety climate and promoting employee commitment to complying with safety rules [Ta, Kim and Gausdal 2022]. Therefore, by involving themselves in the building of the food safety culture, leaders support the organisation's ability to implement the strategy and related food safety goals by reducing the risk of hazards that may affect food safety. A positive food safety culture can therefore reduce the number of food safety incidents and reduce the risk

to the consumer [Yiannas 2008]. Only organisations with a strong food safety culture are properly prepared and can be managed in the event of a crisis as they take into account, anticipate and manage more risks in their activities [Czernyszewicz 2020].

### **3. REQUIREMENTS OF ISO 22000:2018 REGARDING LEADERSHIP**

Having an effective FSMS is a factor crucial for the competitiveness of modern organisations operating in the food chain, and the ISO 22000:2018 standard can support them in the implementation of the system [Monge-Mora et al. 2020]. The FSMS model defined in the standard assumes that the leadership and commitment of the executive staff are two of the key elements of the system, which significantly affects its performance. Therefore, when making a decision to implement the system, the management should be aware of safety risks related to the products manufactured by the organisation, fully convinced of the need to establish the FSMS, and they should actively participate in the implementation and maintenance of the system [International Organisation for Standardisation 2020].

In accordance with the requirements of ISO 22000:2018, when establishing an FSMS, the management should link it to the business activities of the organisation. This means that the system should be designed to be a management tool that enables the organisation to achieve its goals (both at the strategic and operational levels) related not only to food safety but also to business, growth and various aspects of the organisation's operation, such as compliance with the food law, product legality, stakeholder relations, finance, environmental impacts or social responsibility. The management of risks both at operational level (the risk of occurrence of food safety hazards that could have a potentially negative impact on the health and life of consumers) and at business level (organisation management which can affect the organisation's ability to achieve the assumed results) can support the achievement of the organisation's goals [Tranchard 2016]. Thanks to this approach, the FSMS can support leaders in managing the organisation aimed at achieving sustainable market success.

The managerial staff are responsible for providing resources necessary to maintain and improve the system, including personnel, funding, infrastructure and technology. The biggest challenge to the effective implementation of the FSMS is the organisation's personnel [Manning 2017]. Therefore, managers should support employees at all levels of the organisational structure, where work has an impact on food safety. They should also ensure that the staff are aware of the food law, customer requirements for food safety and the importance of the FSMS in improving the functioning of the organisation and the results achieved [ISO 2018].

As an expression commitment to building excellence of the FSMS, the management should establish of a food safety policy defining the organisation's obligations related to the safety of the food produced, which is a basis for defining

the objectives that the organisation will pursue [ISO 2018]. When designing a food safety policy, the management should take into account the specifics of the organisation and the factors that affect its operations [Dzwolak 2018b]. Therefore, it is necessary to involve the management in the analysis of the context in which the organisation operates, i.e. internal and external factors affecting the organisation's ability to achieve goals, as well as in identifying the needs and expectations of various stakeholders [Monge-Mora et al. 2020]. When establishing the structure of the FSMS, the management should ensure that it first meets the requirements of the food law, then the requirements of the stakeholders, and also the internal requirements of the organisation [Manning 2017]. By joining the analysis of the context of the organisation, the management [Jedynak 2015]:

- is aware of the key factors determining the achievement of food safety objectives and the assumed results of the FSMS;
- understands the current conditions of running the business;
- receives information necessary to operationalise the requirements applicable to the organisation;
- reduces the likelihood of food safety objectives conflicting with those of other subsystems within the organisation's management system.

To involve staff in the fulfilment of the commitments contained in the policy, the management should ensure that the policy is communicated and understood throughout the organisation and accessible to the stakeholders [ISO 2018].

The tasks of the management also include the creation of an organisational structure, both management and executive, necessary for the effective operation of the FSMS. As part of the management organisational structure, the managers should appoint a team responsible for food safety, and also appoint and determine the responsibility and powers of the team leader who will be responsible for the substantive correctness and effectiveness of the system [Dzwolak 2008a]. Next, when creating this executive structure, the management should define and communicate to personnel the responsibilities and powers related to the maintenance and improvement of the system, initiating and documenting activities within the system, ensuring compliance of the system with the requirements, and reporting to the management on the performance of the system [ISO 2018]. The defined and communicated responsibilities and powers should be understood by all employees performing tasks within the established FSMS [Dzwolak 2018b].

The method that enables the user to assess the effectiveness of the FSMS and, indirectly, the results of management activities related to its maintenance and improvement, is an internal audit. It is essential that the managers actively participate in the auditing process, lead by example by willingly submitting to audits and support internal auditors. The basic task of the management related to the internal audit process is the analysis of audit results and supervision over the implementation of post-audit activities. The systematic review of management in order to assess the usefulness, adequacy and effectiveness of the system is also evidence of the



managers' commitment to maintaining the FSMS [ISO 2018]. The review verifies compliance with the requirements of the FSMS relating to the management's accountability [Szczepeńska 2015]. It is therefore a form of self-assessment, i.e. a summary of the management's own commitment to maintaining and improving the system. The analysis carried out during the review should focus on processes that have a key impact on food safety, compliance with food law and meeting stakeholders' requirements. The management should also review aspects such as the organisation's policy and objectives both short- and long-term, hence the assessment in the review concerns the strategic level of management.

The results of the analyses and assessments carried out as part of the review should provide the top executives with information as a basis for identifying the elements of the system that need improvement. The review thus enables management to perform managerial functions including decision making. It is therefore an important tool for continuous improvement of the effectiveness of the system and results related to ensuring food safety.

To sum up, the ISO 22000:2018 standard requires the management to be aware of their role in improving the effectiveness of the system, and to set an example with its commitment for all employees and motivate them to take action to improve the system. The requirements of the standard include two interrelated PDCA (plan, do, check, act) improvement cycles enabling problem solving and managing changes to the system. The first cycle refers generally to the improvement of the FSMS and aims to improve its effectiveness and the organisation's ability to achieve its objectives – related not only to ensuring food safety but also to business development. The second cycle relates to operational activities and aims to improve processes that have a direct impact on food safety.

The requirements of the standard are formulated in such a way that the management should take the lead in the implementation of both these cycles – defining the policy and goals of the organisation, planning decisions related to the development of the system and processes affecting food safety, defining rules of conduct related to the implementation of processes, providing the resources necessary to produce safe products, implementing appropriate improvement measures and assessing them in terms of their impact, the degree of achievement of objectives and food safety.

#### **4. LEADERSHIP ASSESSMENT IN EXTERNAL AUDITS OF THE FOOD SAFETY MANAGEMENT SYSTEM**

One way to demonstrate that an organisation has implemented an effective FSMS and is meeting its policy and food safety objectives is through certification. In 2021, more than 36,000 organisations decided to certify their FSMSs for compliance with the requirements of ISO 22000:2018 [ISO 2021]. Due to the importance of

leadership in ensuring effectiveness of the FSMS, one of the most important stages of external audits of the system, carried out by certification bodies, is the audit of the organisation's management.

The requirements of the standards for the FSMS, relating to leadership, apply to managers at every level of the organisational structure (therefore, auditors should talk to managers at various levels while conducting audits). To ensure effective communication during the audit, it is important that the auditor uses business terminology understood by the organisation's managers [ISO 2016].

The auditing of leadership requires proper planning and preparation. When planning an audit, the auditor should allow sufficient time to gather evidence of the management's involvement. Next, when preparing for the audit, the auditor should familiarise him or herself with the organisational management structure and guidelines for its food safety culture [ISO 2016]. The audit should gather evidence of the management's involvement at every level of the organisational structure in assuring food safety and in the operation of the FSMS. Hence, the management should participate in the opening and closing meetings and cooperate with the auditor at every stage of the audit [ISO 2015b].

When conducting an audit of the management's responsibilities, the auditor should focus on assessing:

- the importance and place of food safety in the organisation's strategy;
- food safety culture, including the role of leadership in food development and improvement;
- usefulness of the food safety culture for the implementation of the organisation's strategy;
- adequacy of the food safety policy and its coherence with food safety objectives, as well as the assumption by the management of responsibility for their achievement;
- availability and understanding of food safety policies and goals throughout the organisation;
- management involvement in internal audits and management reviews.

The auditor should also pay attention to the allocation of responsibilities and powers to individuals who perform important functions in maintaining and improving the FSMS, in particular the food safety team leader and team members. However, it is important for the auditor's attention to be transferred during the audit from the activities carried out by the team to the role of the organisation's management in the system [ISO 2015b; 2016].

Evidence of the management's commitment and leadership can be gathered by the auditor by conducting interviews with the organisation's management and operational staff and by analysing the documents made available during the audit. The following can be used as evidence of leadership:

- food safety strategy and policy, including reports on reviews of their timeliness, relevance and adequacy;

- reports on the achieving food safety goals;
- documentation of management reviews;
- reports on internal audits devoted to the assessment of managerial involvement;
- improvements to action plans and protocols on their implementation;
- reports on management meetings with employees responsible for food safety culture, the existing FSMS and food safety issues;
- surveys examining expectations of staff regarding the FSMS;
- surveys examining the perception of leadership and management commitment to improving the culture of food safety and the FSMS by the organisation's staff;
- reports on management meetings with the food safety team;
- investments in improving competences of the food safety team;
- reports on actions taken in food safety emergencies.

## **5. CRITERIA FOR ASSESSING LEADERSHIP IN THE FOOD SAFETY MANAGEMENT SYSTEM**

The ISO 22000:2018 standard, due to its universal nature and ability to be used within any organisation, regardless of the nature of its activities, formulates the requirements for leadership within the FSMS in a general way. For this reason, the standard does not contain operational requirements relating to the implementation of leadership in practice, as well as its assessment both internally, at organisational level, and externally, as part of an assessment carried out by the certification body. Not only does a lack of a coherent approach to leadership in standardised management systems and detailed requirements in this area hinder its parametric assessment but also the scope for its development in the future [Szczepańska 2013].

In terms of standardised food safety management systems, a leadership assessment of the requirements may be carried out, relating to managerial responsibility described in ISO 22000:2018. Given these requirements, the management should determine how they will evaluate their commitment to maintaining and improving the system, and develop measurement criteria and measures. The parametric assessment of leadership can be a problem for an organisation because it requires the use of measurement of qualitative characteristics which are difficult to evaluate. There may also be a risk of lack of objectivity associated with the assessment, as the outcome of the assessment may depend on the perception of the evaluators. One way to reduce the risk may be to include, in the assessment of leadership, the widest possible group of employees of the organisation, representing various functions and levels of the organisational structure.

Examples of criteria and measures for assessing leadership in a food safety management system are presented in Table 1.

**Table 1.** Criteria and metrics for the assessment of leadership in the FSMS

<b>Criterion</b>	<b>Measure</b>
Food safety policy	Frequency of reviews of relevance and adequacy of the policy
	Degree of implementation of policy commitments
Food safety objectives	Degree of achievement of objectives
Management reviews	Number of management reviews carried out on the initiative and with the involvement of the management
	Number of FSMS improvement activities carried out as a result of management reviews
Internal audits	Number of internal audits on leadership and management accountability
	Number of internal audit reports conducted within the organisation that the management has reviewed
External audits	Number of comments and observations formulated by the certifying body's auditors relating to leadership
Management meetings with organisational staff in dedicated to FSMS	Number of meetings
	Number of activities related to the improvement of FSMS implemented as a result of the meetings
The management's support for activities of the food safety team	Number of the management's meetings with the team
	Financial resources allocated to improving the competences of the team members
Knowledge of the organisation's values in the area of food safety by employees	Number of violations of the organisation's rules / procedures / values related to ensuring food safety
	Results of surveys / tests devoted to knowledge of the organisation's values in the area of food safety
	Number of communications / newsletters / brochures / training courses dedicated to the organisation's values in the area of food safety
Perception of leadership by the organisation's staff	Results of staff surveys / interviews devoted to leadership assessment
FSMS improvement activities	Number of FSMS improvement activities undertaken on the initiative of the management
Staff participation in the improvement of the FSMS	Number of FSMS improvement activities undertaken on the initiative of staff

cont. Table 1

	Number of competitions / initiatives motivating staff to propose improvement activities
	Number of incidents and violations reported by staff related to ensuring food safety
Compliance of the organisation's activities with the food law	Number of comments and recommendations formulated in the inspection reports of the official food control authorities
Dealing with crisis situations	Number of crisis team meetings with management

Source: own study.

Systematic leadership assessment, based on formalised principles and measurable criteria, is essential not only to demonstrate compliance with the requirements of ISO 22000:2018 regarding the management's accountability but also to identify weaknesses in this leadership and their causes. It can also be a basis for identifying actions that the management can take to increase their commitment to maintaining and improving the system, thereby increasing its effectiveness.

## 6. CONCLUSIONS

Leadership is a key element of any FSMS and a determinant of its effectiveness and ability to achieve the intended results. It is also a prerequisite for building a positive food safety culture and implementing an organisational strategy aimed at protecting the health and life of consumers by providing them with safe food. Therefore, the involvement of managers in the maintenance and development of the system should be systematically evaluated.

ISO 22000:2018 does not require the leadership assessment process to be formalised and described as part of a documented procedure, and neither does it require the results of this assessment to be archived. However, despite the absence of formal requirements, it is reasonable to define and apply measurable assessment criteria, adapted to the specifics of the organisation, as well as the level of management within the organisational structure. Measurable criteria will ensure objectivity of the assessment, which will enhance the usefulness of its results to the management in taking actions to increase their level of their commitment.

The criteria and measures suggested in the article can also be a tool for assessing leadership in various areas. Their implementation will make it possible to assess the involvement of managers in:

- defining the commitments and intentions of the organisation, expressed in the food safety policy and objectives, as well as assessing their implementation;

- assessing the performance of the FSMS and the results achieved by the organisation in the area of food safety, as well as the use of assessment results to identify the need for system improvement;
- providing support for the organisation's staff responsible for maintaining and improving the FSMS;
- building the organisation's food safety culture, expressed by communicating the requirements of the FSMS and involving personnel in identifying opportunities for system improvements and implementing these improvements.

The proposed measures are universal in nature, which is why they can also be an inspiration for those food chain organisations that do not wish to implement an FSMS based on the requirements of ISO 22000:2018 but have a legal obligation to implement the HACCP system in accordance with Regulation (EC) 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs. Within this system the implementation and development of a food safety culture.

The assessment of leadership should be made during FSMS internal audits and may also be included as one of the assessment areas of management reviews. It can also support management when preparing the organisation for external FSMS audits carried out by the certification body. The management should be aware that when conducting audits in the field of managerial tasks and responsibilities, auditors will seek evidence of leadership and commitment. Accordingly, the management should be prepared to produce such evidence.

## REFERENCES

- Bugdol, M., Jedynek, P., 2012, *Współczesne systemy zarządzania. Jakość, bezpieczeństwo, ryzyko*, Helion, Gliwice.
- Commission Regulation (EU) 2021/382 of 3 March 2021 amending the Annexes to Regulation (EC) No 852/2004 of the European Parliament and of the Council on the Hygiene of Foodstuffs as Regards Food Allergen Management, Redistribution of Food and Food Safety Culture (OJ L 74, 4.3.2021).
- Czernyszewicz, E., 2020, *Kultura bezpieczeństwa w produkcji żywności. Koncepcje i pomiar*, Wyd. Uniwersytetu Przyrodniczego w Lublinie, Lublin.
- Dzwolak, W., 2018a, *Wprowadzenie do systemowego zarządzania bezpieczeństwem żywności wg normy ISO 22000:2018*, Przegląd Mleczarski, no. 9, pp. 41–46.
- Dzwolak, W., 2018b, *Wymagania ISO 22000:2018 – cz. 1. Kontekst organizacji, przywództwo i planowanie*, Przegląd Mleczarski, no. 10, pp. 8–13.
- Goffnett, S.P., 2020, *Leadership, Goal Acceptance, and QMS Conformance Readiness: Exploring the Mediating Effects of Audit Team Cohesion*, Total Quality Management, vol. 31, no. 1, pp. 43–67.
- Griffin, R.W., 2017, *Podstawy zarządzania organizacjami*, Wyd. Naukowe PWN, Warszawa.
- Hawrysz, L., 2014, *Kluczowe czynniki sukcesu przy implementacji systemu zarządzania jakością*, Zarządzanie, Teoria i Praktyka, no. 10(2), pp. 35–40.

- IFS Management GmbH 2020, *Standard for Assessing Product and Process Compliance in Relation to Food Safety and Quality*, Version 7, IFS Management GmbH, Berlin.
- ISO, 2015a, International Organization for Standardization, *Quality Management System. Fundamentals and Vocabulary*, ISO 9000:2015, International Organization for Standardization, Geneva.
- ISO, 2015b, International Organization for Standardization, *Conformity Assessment. Requirements for Bodies Providing Audit and Certification of Management Systems, Part 1: Requirements*, ISO 17021-1:2015, International Organization for Standardization, Geneva.
- ISO, 2016, International Organization for Standardization, *ISO 9001 Auditing Practices Group. Guidance on Top Management*, International Organization for Standardization, Geneva, (07.02.2023), <https://committee.iso.org/home/tc176/iso-9001-auditing-practices-group.html>.
- ISO, 2018, International Organization for Standardization, *Food Safety Management Systems. Requirements for Any Organization in the Food Chain*, ISO 22000:2018, International Organization for Standardization, Geneva.
- ISO, 2020, International Organization for Standardization, *Food Safety Management Systems. A Practical Guide*, ISO 22000:2018, International Organization for Standardization, Geneva.
- ISO, 2021, International Organization for Standardization, *The ISO Survey*, <https://www.iso.org/the-iso-survey.html> (22.01.2023).
- Jedynak, P., 2015, *Relacje organizacji z otoczeniem. Perspektywa znormalizowanych systemów zarządzania* [in:] Borys, T., Rogala, P., Skowron, P. (eds.), *Zrównoważony rozwój organizacji – odpowiedzialne zarządzanie*, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, no. 376, Wyd. Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław.
- Książek, D., Ligarski, M., 2015, *Rola liderów w kształtowaniu jakości w kontekście przygotowywania samooceny do konkursu polskiej nagrody jakości*, no. 3(12), pp. 81–89.
- Kwiatek, K., Patyra, E., 2021, *Kultura bezpieczeństwa żywności jako nowy element w systemie zapewnienia jej bezpieczeństwa*, Życie Weterynaryjne, no. 96(7), pp. 516–519.
- Manning, L., 2017, *The Influence of Organizational Subcultures on Food Safety Management*, Journal of Marketing Channels, no. 24(3–4), pp. 180–189.
- Monge-Mora, P.M., Oliveira, D.L.G., Shevchenko, K., Cabecinhas, M., Domingues, P., 2020, *Critical Success Factors During the Implementation of ISO 22000:2018*, Proceedings Book of ICQEM 2020 – 4th International Conference on Quality Engineering and Management, Braga, pp. 350–362.
- Oberst, A., 2021, *Developing a Food Safety Culture – The Imperative of Performance Leadership*, Proceedings of the International Economic Conference “Competitiveness and sustainable development in the context of European integration”, The Faculty of Economic Engineering and Business, Technical University of Moldova, Chişinău, pp. 153–159.
- Odumeru, J., Ogbonna, I., 2013, *Transformational vs. Transactional Leadership Theories: Evidence in Literature*, International Review of Management and Business Research, vol. 2, no. 2, pp. 355–361.
- Patejczyk, N., Kobos, E.K., 2022, *Leadership in Organisations: Characteristics, Importance, Methods of Management in Different Sectors*, Economic and Regional Studies, no. 15(2), pp. 237–249.
- Purwanto, A., Hutagalung, L., Yanthy, E., 2020, *Food Safety Management Leadership Style: Transformational or Transactional?* Jurnal Ekonomi dan Manajemen, vol. 14, no. 1, pp. 170–182.
- Sharman, N., Wallace, C.A., Jespersen, L., 2020, *Terminology and the Understanding of Culture, Climate, and Behavioural Change – Impact of Organisational and Human Factors on Food Safety Management*, Trends in Food Science & Technology, no. 96, pp. 13–20.

- Stoner, J.A.F., Freeman, R.E., Gilbert, D.R., 1998, *Kierowanie*, Polskie Wydawnictwo Ekonomiczne, Warszawa.
- Szczepańska, K., 2013, *Doskonalenie zarządzania jakością. Podstawy, ocena, perspektywy*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa.
- Szczepańska, K., 2015, *Zarządzanie jakością. Koncepcje, metody, techniki, narzędzia*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa.
- Ta, M.T.D., Kim, T.-E., Gausdal, A.H., 2022, *Leadership Styles and Safety Performance in High-Risk Industries: A Systematic Review, Safety and Reliability*, no. 41(1), pp. 10–44.
- The European Foundation for Quality Management, 2021, *The EFQM Model. Revised 2nd edition*, Brussels.
- Tranchard, S., 2016, *Revision is Ongoing for ISO 22000 on Food Safety Management*, <https://www.iso.org/iso-22000-revision.html> [20.01.2023].
- Walaszczyk, A., Mnich, J., 2021, *Kultura bezpieczeństwa żywności jako wymaganie-wyzwanie dla przedsiębiorstw łańcucha żywnościowego*, [in:] Walaszczyk, A., Koszewska, M. (eds.), *Zarządzanie przedsiębiorstwem wobec współczesnych wyzwań technologicznych, społecznych i środowiskowych*, Wyd. Politechniki Łódzkiej, Łódź, pp. 124–139.
- Wiśniewska, M., Kowalska, A., 2022, *Kultura bezpieczeństwa żywności w prawie Unii Europejskiej. Czy polski system kontroli żywności sprostą wyzwaniu?* *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, vol. LXXXIV, no. 2, pp. 177–191.
- Wiśniewska, M., Malinowska, E., Piekarska K., 2018, *Kultura bezpieczeństwa żywności w teorii i praktyce*, *Problemy Jakości*, no. 11, pp. 7–15.
- Wolniak, R., 2012, *Kryterium przywództwa w ocenie poziomu dojrzałości systemu zarządzania jakością*, *Prace Naukowe Uniwersytetu Ekonomicznego We Wrocławiu, Orientacja na wyniki – modele, metody i dobre praktyki*, no. 264, Wrocław, pp. 475–487.
- Yiannas, F., 2008, *Food Safety Culture. Creating a Behavior-Based Food Safety Management System*, Springer, New York.