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## TOOLS FOR IMPROVING THE QUALITY AND FOOD SAFETY MANAGEMENT SYSTEM

According to the definition in the Polish dictionary, the tool is: «a simple or complex device enabling performing an activity or work» [Szymczak et al., 1984]. In any of the management standards and developed by ISO, we will not find a similar definition as well as the term «tools for improving the quality management system», which of course is not synonymous with the lack of such tools. Instead, the concepts of measurement process, performance indicators or monitoring methods are used, which largely coincide with the above definition of the tool. Section 8.5 Improving the ISO 9001 standard that the organization continually improve the recommends quality management system using 7 basic tools: quality policy, quality objectives, internal audits, data analysis, corrective actions and preventive management reviews [Borys and Rogala, 2011]. Section 8.3 Measurements of the ISO 9004 standard adds 2 other solutions that can be used by the organization to improve the quality management system – benchmarking and self-assessment.

In ISO 2200, in subchapter 8.5 on improvement, as many as 8 tools are presented for continuous improvement of the effectiveness of the food safety management system: communication, management reviews, internal audits, assessment of individual verification results, analysis of the results of verification activities, validation of a combination of supervision measures, validation corrective and updated food safety management system [PN-EN ISO 22000, 2006]. As you can see, both the same improvement tools are listed in both ISO 9001 and ISO 22000: internal audit, management review and corrective actions. For this reason, these tools were discussed only once, with the characteristics of the QMS improvement tools. All improvement tools listed in each of the above standards are characterized below.

The first of the tools listed in the ISO 9001 standard, i.e. quality policy, is the overall intentions and orientations of the organization regarding quality, formally

expressed by the management of the organization [Łunarski, 2010]. The quality policy is one of the four mandatory documents, next to the quality book, quality objectives and product implementation planning that a certified organization must have. All employees, clients and other interested parties should know and understand the organization's quality policy. The ISO 9001 standard formulates a set of basic obligations that must be found in every quality policy. Viewing and updating the quality policy are mechanisms that can affect changes in the management system introduced [PN-EN ISO 9001, 2009].

Quality goals are the next necessary solution for a certified organization. Top management must set quality objectives at the appropriate levels of the organization and for the respective functions, including with the purposes needed to meet product requirements. It is advisable that the quality objectives are measurable and consistent with the organization's quality policy [PN-EN ISO 9001, 2009].

The ISO 19011 standard defines audit as «systematic, independent and documented process of obtaining audit evidence and its objective assessment in order to determine the degree of fulfillment of audit criteria» [PN-EN ISO 19011, 2012]. An internal audit, also referred to as the first page audit, is conducted by the organization itself or on its behalf for the purposes of management review, organization preparation for supervision audits, certification audits and for other internal purposes. Correctly conducted internal audit is the basis for the organization's declaration of compliance. Internal audit is one most popular and at the same time the most effective tools for determining the levels of compliance of an organization's management system with specific criteria. The information provided by the audit helps in understanding, analysis and continuous improvement of the organization's activities [Łańcucki, 2010].

Collecting and analyzing relevant data allows the organization to assess the possibilities of continuous improvement of the quality management system. The data covered by the analysis should be the result of measurement and monitoring. They can also come from from other sources. Properly conducted data analysis provides the organization with a range of information on customer satisfaction, the degree of compliance with product and supplier requirements, as well as the properties and trends of processes and products [PN-EN ISO 9001, 2009]. Preventive actions are preventive actions that eliminate the causes of potential non-compliance in order to prevent their probable occurrence. Examples of preventive measures include additional employee training or a change of supplier due to supply instability.

Corrective actions are actions taken by the organization to eliminate the causes of non-compliance and prevent their recurrence. These activities are most often undertaken as a result of a positively considered customer complaint, discrepancies detected during internal audits or finding low efficiency in achieving the goals set by the organization [Urbaniak, 2004]. The management review is another tool used in the continuous improvement of quality management systems and food safety. Overview, due to the nature of the work, it will be characterized in detail in the next section. Benchmarking is about finding a model competition and comparison to her organization. Then, the considered competitive issues are adapted to the needs of their enterprise [Łuczak and Matuszak-Flejszman, 2007]. A more commonly used and more developed formula is the described definitione in the ISO 9004 standard, according to which «benchmarking is a measurement and analysis methodology that an organization can use to search for best practices inside and outside the organization in order to improve its own achievements» [PN-EN ISO 9004, 2010]. Benchmarking is not based, however, on copying readymade solutions, but on developing a method of reaching the best of them [Łuczak and Matuszak-Flejszman, 2007].

Self-assessment is a comprehensive and systematic review of activities and the organisation's results in relation to the organisation's level of maturity. Properly conducted self-assessment provides a complete overview of the organization's achievements and the degree of maturity of the introduced management system. It is also helpful in identifying areas for improvement or introducing innovation, as well as prioritizing future actions. The output from self-assessment is used to determine the strengths and weaknesses of the organization, shows the level of its maturity and with repeated self-assessment – the organization's progress over a given period. Self-assessment results can be used as input for management reviews. Correct self-assessment is also a learning tool that supports the improvement of the organization's vision and distinguishes the involvement of stakeholders [PN-EN ISO 9004, 2010].

Communication is the first improvement tool listed in the ISO 22000 standard. Communication is divided into external and internal. In order to provide sufficient information on food safety issues, the company should establish, implement and then maintain effective methods of (external) communication with: suppliers and contractors, customers or consumers, authorities resulting from legal provisions and statutes, and other organizations that have or may have influence on effectiveness of the system's functioning or its update. Proper communication should provide information on aspects of the company's food safety that may be relevant to other organizations in the food supply chain. Subscriptions from the conducted communication must be maintained. Requirements for food safety defined by statutory and other authorities, as well as those defined by clients should be easily accessible to interested parties. Employees appointed in the company should have specific rights and responsibilities for external communication regarding food safety. Information obtained as a result of external communication should constitute one of the input data for the system update and for management review.

The company should also use effective means of (internal) communication between employees or management in matters affecting food safety. In order to maintain the effective functioning of the food safety management system, the food safety team should be kept informed about changes including product, raw materials, components, services, production systems and equipment produced (or put into production) (including the place of production, location of this equipment, the surrounding environment), cleaning and sanitation programs, packaging, storage and distribution system, employee qualification level, division of responsibility and the rights between them, the requirements set out in laws and regulations, knowledge of food safety hazards and applied surveillance measures, the requirements of the sector customer, and other requirements that the company must comply with, significant inquiries from interested parties, complaints indicating a food safety risk related to the product, as well as other conditions affecting food safety. This information should be input to the company's system updates as well as management reviews.

Individual results of planned verification should be systematically evaluated by the food safety team. If the verification does not show compliance with the planned arrangements, the company should take steps to achieve this compliance. These activities should include, inter alia, existing procedures and communication channels, conclusions from threat analysis, establishment of operational prerequisite programs (PRPs) and HACCP plans, as well as effectiveness of training and human resource management. The analysis of the results of the verification activities should be carried out by the food safety team. The results of internal and external audits are included in the analysis of the results of the verification activities. This analysis is conducted to confirm the compliance of the food safety management system with the requirements of the ISO 22000 standard and other organization arrangements. It is also helpful in identifying trends that may indicate a higher frequency of potentially dangerous products. The analysis of the results of verification activities is also used to determine the information necessary for planning internal audits (taking into account the statute and validity of the audited areas). This analysis also allows you to verify the effectiveness of corrections and corrective actions taken. Records of analyzes should be maintained. The effects of the analysis should be the input to management system updates and management reviews.

Before an enterprise implements supervision measures for operational preprograms (PRP) and the HACCP plan, it should validate whether the selected control measures are able to achieve the intended level of supervision of food safety hazards for which they were designated and whether they are able to provide supervision of the identified threat, obtaining defined, acceptable levels for final products obtained. If the validation result shows that any of the above or both assumptions cannot be confirmed, the surveillance measures should be modified and reassessed. Modifications may include changes in supervisory measures (e.g. process parameters, accuracy), changes in raw materials, manufacturing technology, final product properties, distribution methods, or end use. Top management of the organization should ensure systematic updating of the food safety management system. To this end, the team Food safety should evaluate the food safety management system at specified intervals. This team decides what should be reviewed during such a meeting: threat analysis, introductory programs or HACCP plans. The assessment and update should be based on input data arising from communication and other information taking into account the usefulness, responsibility and effectiveness of the food safety management system and output from the analysis of verification activities, as well as from previous management reviews. Activities related to the system update should be included in the input data for the management review [Łańcucki, 2006; PN-EN ISO 22000, 2006].

Improvement of management systems, however, need not necessarily be based only on the mechanisms required by the ISO 9001, ISO 9004 or ISO 22000 standards. The internal improvement instruments discussed in the work are an integral part of management systems. In addition to these, external mechanisms can be identified that may or may not be used by the organization because they are not required by none of these standards. These solutions include the implementation of formal management systems, or the introduction of other new concepts, methods or management techniques that help in better functioning of management systems, e.g. Lean Manufacturing or knowledge management [Borys and Rogala, 2011].

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## ENTREPRENEURSHIP AND THE BORN GLOBAL CONCEPT

The phenomenon of accelerated (early) internationalization limits the use of existing theoretical achievements in the field of internationalization. Sequential models such as the Uppsala model have been completely eliminated in this theory. Foreign expansion here is not preceded by success in the internal market and long-term breaking of the mental (cultural) distance between the domestic market and foreign markets. In this case, the essence of their activity is understood as wider innovation. Specific resources, including