

SHAPING THE QUALITY OF A MANUFACTURING ORGANISATION IN THE CONTEXT OF SELECTED ASPECTS OF STRATEGIC MANAGEMENT

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Purpose: Presenting an original methodology for assessing opportunities and threats to a manufacturing organisation, which uses proprietary scenario sheets of possible events to gather information for formulating the organisation's strategy. With the input assumption that the organisation wants to increase its participation in global markets and thus achieve success.

Design/methodology/approach: A mature organisation that is quality-focused is aware of the need for strategic thinking in each of its fields of operation and in each of its processes, with a constant assessment of the opportunities and threats resulting from the relations between the production enterprise and its environment. The proposed methodology provides an opportunity to obtain information, translate it into a formulated strategy and thus into effective actions. Thanks to the attributes included in the developed scenarios, the organisation has the opportunity to verify its attitude to the implementation of the indicated activities, namely: concerning the development through the indicated opportunities; as well as the probability of the occurrence of threats in relation to the indicated activity. The graphical form of the power diagram template for groups of criteria such as Customer Orientation, Organisational Improvement, Strategy and Organisational Culture, Production Process and Technology Management, Intellectual Capital Management, Quality Management, Occupational Safety and Environmental Protection, will allow the organisation to react and adapt to change more quickly in today's dynamic markets.

Findings: The most important findings relate to obtaining the information needed to formulate both the organisation's strategy and to estimate the potential level of management risk. In addition, the scenarios built and their analysis will allow the corporate entity to be able to react more quickly to external and internal stimuli and will influence the reduction of time when making decisions related to the functioning of its own entity.

Research limitations/implications: The formulated worksheets of scenarios are a proposal for an organisation that is quality-oriented, is a learning organisation, and thus consciously transforming itself towards complex, holistic strategic concepts that influence market positioning and success. At the same time, it should be remembered that the organisation's ability and level of use of the empirical knowledge gained will depend on an objective estimation of the quantities according to the adopted scale. In conclusion, a lack of objectivity will consequently work to the disadvantage of the organisation.

Practical implications: The proposed scenario sheets will allow for the evaluation of the negative and positive strength of the attributes' influence in scores and significance, as well as further trend analysis and the formulation of a pessimistic, optimistic and most likely scenario. They will thus provide an input for defining the company's strategic objectives.

Social implications: Continuous development of the organisation, understanding of its opportunities and threats will improve the work experience as well as create a company culture.

Originality/value: The publication contains the author's development of worksheets of possible events, including a form for the most positive scenario, the most negative scenario and the most likely scenario in the assessment of the organisation, as well as a template for a strength of influence chart for a group of attributes and their factors. The defined attributes and factors were formulated in accordance with the adopted methodology for building the MSOP self-assessment model using the Quantitative Priority Grading methodology, of importance approach, the AHP method and expert interviews.

Keywords: organisation, strategy, quality, environment, scenario methods, trend analysis.

Article category: Scientific article.

1. Introduction

The modern production organisation, operating in the current market, regardless of its size and type of production, is focused on achieving success. Thus, the organisation is aware of being subjected to a number of endless transformations, the main aim of which is to constantly adapt to changing dynamically growing market requirements and, at the same time, to meet the expectations and needs of both regular and potential customers. Consequently, it is important to be proactive, to recognise the need for change and to intensify internal development-oriented activities. In particular, this concerns the creation of an appropriate corporate strategy in the context of its development and the shaping of quality in all areas of its activities. At the same time, the unit is aware that the strategy it develops should be integrated with the vision, mission and quality policy, with implemented goals ranging from strategic to tactical to operational. It should also include an appropriate and factual distribution of responsibilities according to the competences of the employees, with a map of the organisation's processes and a clear structure adopted.

Thus, different aspects of the competitiveness of the organisation and thus the conditions for the formation of the strategy of the production organisation turn out to be: information, quality, knowledge intellectual capital organisational culture technology openness to effective ways of working. By developing an appropriate strategy in a quality-oriented organisation linked to a process- and employee-oriented improvement methodology, it is possible to transform its weaknesses into strengths and thus reduce threats and increase opportunities in a dynamic environment. The validity of such an outlook is reflected in the opinion of E. Skrzypek, S. Tkaczyk, who believe that looking at quality in an enterprise today is undoubtedly becoming the most important management mechanism and strategy element leading to a modern form of industrialisation (Skrzypek, 2000; Tkaczyk, 2010).

Viewing the management of a quality-oriented production enterprise in this way correlates with the need for a proper analysis of defining opportunities and threats to the organisation, as well as the formulation of scenarios of possible events, ranging from the pessimistic, through the most likely, to the optimistic. At the same time, with the above in mind, in each of these ways of analysing the organisation's activities affecting the construction of the strategy and, consequently, the perception of its success; uncertainty also manifests itself. E. Fermi rightly observed that (...) supposedly unquantifiable issues in business reveal secrets through the simple method of observation, once the illusory veil of unquantifiability is lifted (...). D. Hubbard defined measurement as the result of insights that quantitatively reduce uncertainty (Hubbard, 2013).

An organisation should therefore be aware of possible risks, uncertainties and hazards. According to PN-ISO 31000:2012, the impact of uncertainty on objectives is risk. It causes a deviation from expectations - either positive or negative. It seems right, therefore, to perceive the actions aimed at eliminating risk contained in the ISO 9001:2015 standard, according to which the organisation should plan actions aimed at eliminating aspects of risk and exploiting opportunities that have been defined, identified. The actions taken are to correlate proportionally with the potential consequences of the unworthiness of products, services and customer satisfaction.

In this context, the article presents the author's scenarios of possible events developed on the basis of the Model of Self-Assessment of a Quality-Oriented Production Organisation (MSOP) (Dudek-Burlikowska, 2023) and the adopted scale of assessment of potential negative and positive impact strength in the point and meaning system. The proposed solution adds value in the context of collecting information for the formulation of the enterprise's strategy, as well as providing an opportunity to assess opportunities and threats within the organisation and indicating the need to translate them into relations with the closer and further environment.

2. Quality oriented production organization and its environment – theoretical aspects

2.1. Organization management and its environment

Organisational governance is a very complex structure, many times difficult to define clearly. It is therefore worth taking a look at selected solutions, concerning management and thus the organisation management K. Perechuda defined management as an activity aimed at solving emerging problems in the course of achieving goals, and that is: pursuing goals consciously and non-randomly, implementing knowledge and skills to solve problems and making the "right" choices (Morawski et al., 2010). According to W. Griffin, management is a continuous process of creating rules, norms, forms and descriptions that bring organisations

closer to achieving intended goals based on a formulated strategy. It is a set of organising, controlling and planning functions that are structured and performed by the actions of managers (Griffin, 2001). R. Pascale and A.G. Athos, on the other hand, have formulated a set of "seven S" that act as determinants of effective organization management and have a clear impact on a company's ability to succeed (Fig. 1) - one of which is strategy (Zbiegień-Maciąg, Długosz-Truszkowska, 1995; Rasiegl, Friga, 2004).

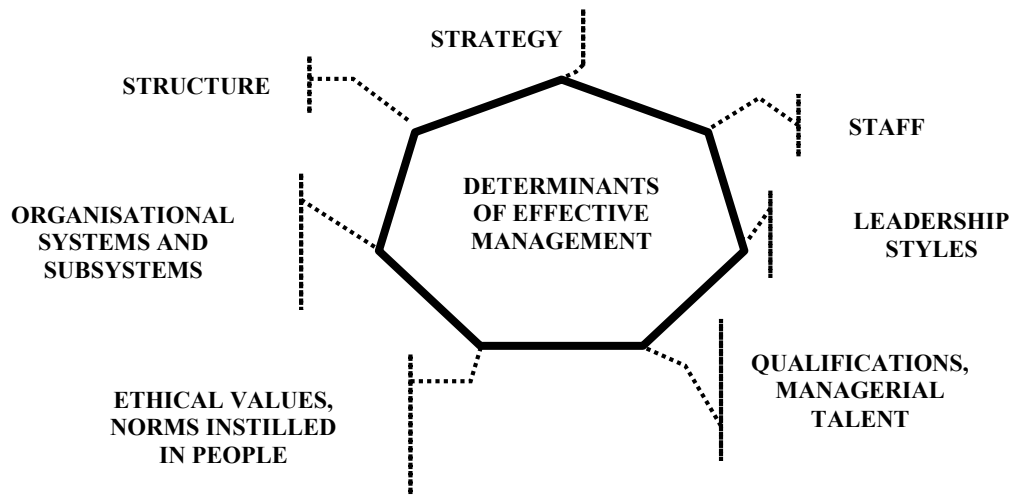


Figure 1. A set of "seven S" acting as determinants of effective management.

Source: own work on the basis of Zbiegień-Maciąg, Długosz-Truszkowska, 1995.

J. Penc uses the following formulation: (...) Management is a type of management in which the title to exert influence on the hierarchy and systems of values, interests and aspirations, as well as attitudes and organisational behaviour of those managed results mainly, although not exclusively, from the manager's command over, or the fact that the manager has at his disposal, material and energy or nominal and informational resources of particular importance for the functioning and development of the organisation, or from the very conviction of those managed that the manager has the possibility of obtaining these resources. (...) Management is a kind of 'wandering through chaos', the construction of reality from the elements available to the manager: ideas, people and relations between them, formal and legal institutions, material resources (machinery, equipment, buildings, materials, finished goods, etc.) and money, as well as the rights to dispose of them (...) (Penc, 1997, 2007).

Bearing in mind the evolution of the approach to management, starting with the classical approach, through behavioural, systemic, situational and ending with the approach creating management as a philosophy of creating added value for the organisation (resource-based), it is possible, according to the proposal of Ł. Sułkowski, we can distinguish three areas of defining management, namely (Morawski et al., 2005; Sułkowski, 2005): management interpreted as the implementation of tangible and intangible resources to achieve set objectives, management perceived as a decision-making process, management as a method of leadership, exercising power and formulating strategy.

The above considerations can only reinforce the validity in perceiving organisational management as a very complex and variously defined aspect that voluntarily combines the three proposed tracks of thinking in the category of efficient management of contemporary organisations (Sułkowski, 2005).

P. Drucker notes that the organisation management aimed at the achievement of defined goals is a complex system, which includes many factors, it is, in his opinion, "(...) the dominant institution in the world today, (...) reflecting the beliefs of modern Western society (...) the belief in the possibility of controlling the means of human existence through the systematic organisation of economic resources (...) (Drucker, 1994). The modern approach to organisational management, as proposed by P. Drucker, is presented in Fig. 2. The indicated features of management emphasise the importance of such elements as: forms of influence on human resources, ethics in business, behavioural norms, information flow in management, effectiveness in taking actions aiming at the implementation of the set goals, economy of production (Drucker, 1992; Dołhasz et al., 2009). And as a result, they have a huge impact on the formation of quality and the formulation of corporate strategy.

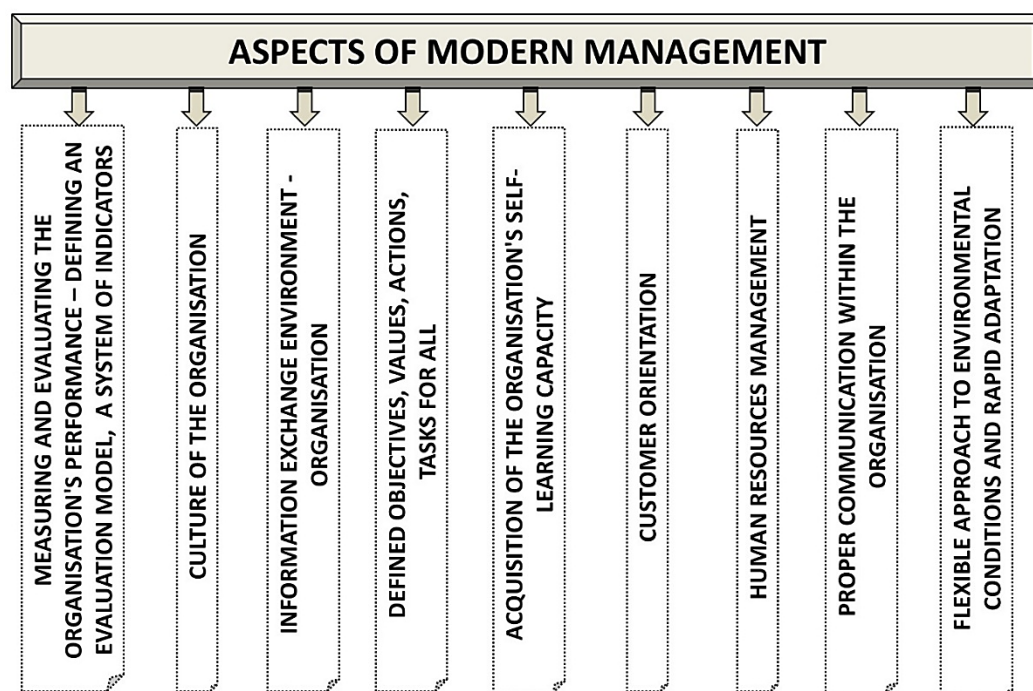


Figure 2. Interpretation of the modern approach to aspects of management according to P. Drucker.

The modern form of production management in organisation can therefore also be presented as a function translating are inputs into products dependent on the variables of traditional inputs which are labour power also fixed capital and working capital the potential of employees their human capital as the unique knowledge produced through innovation any other measurable determinant of productivity production (Dobrodziej, 2004).

It is important to emphasise the approach as to how the organisation's environment is perceived. Bearing in mind that all organisational management processes should directly or indirectly take into account the external conditions of the organisational unit, the management of the enterprise should not only define the environment, but it should also remember that all activities in this area should be continuous, as they have a direct impact on the quality of products and the adopted strategy of the organisation.

Therefore, the complexity of the organisation-environment relationship, as well as the diversity of external conditions, subject to many dynamic and turbulent changes, translates into a variety of definitions and classifications of the elements of the environment. Thus, one aspect remains constant, that there is a continuous interdependence between the organisation and the environment. In the literature on the subject, one can see a multidirectional multi-faceted interpretation of the factors comprising the organisation's environment; the most popular formula, which has been adopted, defines the enterprise as an entity functioning in an environment that is divided into a further environment (macro environment) and a closer environment (micro environment) (Gierszewska, Romanowska, 2009; Griffin, 2001) (Fig. 3) (Dudek-Burlikowska, 2019).

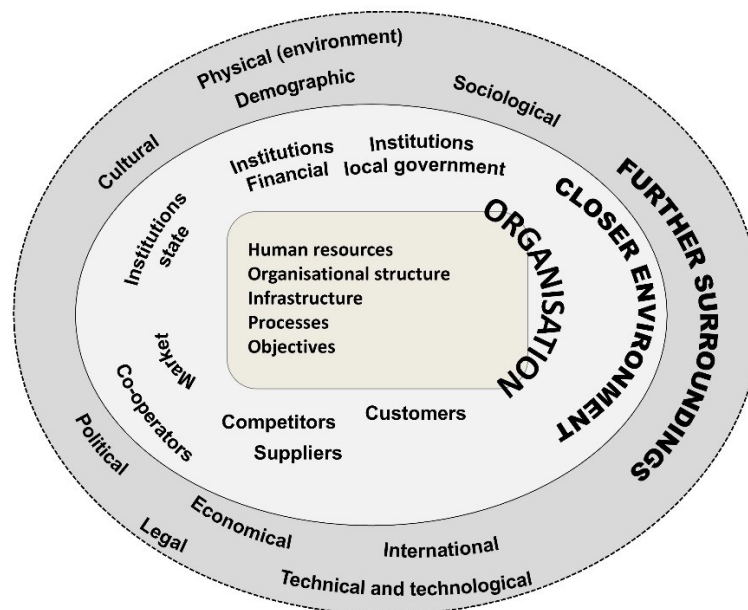


Figure 3. The organisation and its environment.

The essence of the further environment is that the managers have the task of constantly observing these conditions, they are aware of the need to take them into account in the planning and operation of the organisation, but have little or no influence to change them. The proximity environment is actually an element of the organisation's strategy, without which it may not be possible to achieve a high market position. Due to the increasing emphasis on the importance of defining states of uncertainty in the organisation, risk management, thus formulating scenarios of possible events, it is worth looking at the environment from the point of view of the behaviour of its elements, hence we can distinguish (Morawski et al., 2010): calm, restless and turbulent environment.

Table 1.*Characteristics of the environment from the point of view of the behaviour of its elements*

Type of environment	Characteristics	Attributes of the environment
Quiet surroundings	Stability, lack of close links between elements, static nature of the course of change.	Staticity of change Stability
An unsettled environment	Dynamic changes within the elements and the links between them and the organisation.	Dynamics Activity
A turbulent environment	Lack of control over the future due to very rapid changes in relation to the elements of the environment as well as the relations between them, taking into account and emphasising the close interdependence between the elements.	Close links Rapid changes Lack of control

Source: own elaboration based on (Morawski et al., 2010).

Every organisational unit making its decisions and building its strategy is obliged to measure the complexity of its environment and observe the rate of change in its environment. In fact, this is a very dynamic activity and only due vigilance and speed of reaction is a guarantee that managers will do the right thing when it comes to making decisions and building the organisation's strategy. However, each of these decisions is also exposed to risk due to the turbulence and dynamism of the markets. The greater the uncertainty, the greater the risk of a wrong decision or failure.

D. Hubbard thus rightly observed that " Reducing uncertainty is decisive in business. Major decisions made in a state of uncertainty, such as the approval of a major IT project or the introduction of a new product, can be made even a little better by reducing uncertainty. Such a reduction in uncertainty can be worth millions (...)'". According to his approach, measurement does not have to eliminate uncertainty at all, it is important to be able to reduce it (Hubbard, 2013). In order to carry out the aforementioned reduction of uncertainty, and in particular the uncertainty of the environment, appropriate strategic management tools must be used, in this case the scenario method.

2.2. Systemic organisation management quality-focused

The contemporary perception of systems thinking in organisations is the unification of the so-called five areas, i.e. systems thinking, personal mastery, mental models, building a shared vision of the future, team learning created at three levels of thinking, and this (Sierpińska, Jachna, 2002): Essence - holism, interrelationships. Principles - structure for influencing behaviour, resistance to changing rules, reinforcement. Practices - systemic archetypes, simulations. Nowadays, any company that sees the need to manage in a flexible and agile manner, as well as the need to develop by forecasting the future - strategic planning - is aware of the need to create and implement a management system that will allow it to realise the defined objectives of the organisation and, at the same time, be able to co-create its success and achieve a high position in global markets.

In the PN-EN ISO 9000:2006 standard, a system is defined as a set of interrelated or interacting elements necessary to establish the policy, objectives of the organisation, as well as to define and specify the processes needed to achieve the set objectives. According to the standard, the elements of a management system are the organisational structure, defined positions with assigned competences and responsibilities, and thus plans, objectives ranging from strategic to operational. In the following definition, special attention is paid to the form in which the management function is defined and applied in quality-oriented organisations.

The literature assumes the existence of two basic types of systems (Robbins, DeCenzo, 2002): a closed system - not subject to any influence from the environment and thus having no relationship with it, and an open system - having dynamic and continuous interactions with the environment. G.A. Rummler and A.P. Bracher point out that "a systemic view of the organisation is the starting point, the basis for designing and managing organisations that will be able to respond to a new reality characterised by ruthless competition and changing customer expectations" (Rummler, Bracher, 2000). It can therefore be assumed that an enterprise is this particular type of system. An enterprise has been described as an open system, i.e. an entity with a set of rules, regulations valid for and applied by all employees, independently setting goals at the strategic, tactical and operational levels, which it is capable of achieving. It also owes its ability to execute them to proper organisational management (Tkaczyk, Dudek, 2001). A management system is the organisation management in a planned, precise, logistical, systematic and consistent manner, excluding voluntary action. This system takes into account in its activity the correctness and cyclicity of the processes occurring in the enterprise, is flexible, reacts quickly to changes in a thoughtful manner, optimises activities and takes into account risk aspects (Maleszka, Łagowski, 2009).

The management system is also an integrated set of processes and tools that the enterprise uses for the development of its strategy, its translation to tactical and operational levels, and for monitoring and improving their effectiveness (Kaplan, Norton, 2008).

A systemic view of organisational management requires a multi-pronged approach and one that is possibly aligned with the following rules, and this (Dudek-Burlikowska, 2010; Dudek-Burlikowska, 2019):

- ✓ For one management system, each management solution should be well thought out, implemented properly as needed. It should not come into negation with the other areas and processes of the organisation operating within the rules and procedures adopted by the management system framework.
- ✓ The implemented standards, principles and ideas should help in the design of the system. They are a source for defining the features of a management system.
- ✓ The formulation of objectives, requirements and rules reflecting the nature of the organisation that are understandable and adapted in their detail to all its employees, regardless of their position, is a must.

- ✓ The correct definition of the organisation's processes, the indication of the information flow paths and the relationships between them through the graphic design of a process map is the basis for the proper functioning of the company.
- ✓ It is necessary to develop a form of system validation to confirm the validity of the requirements defined against it.

S. Tkaczyk rightly notes that the development of the requirements of today's turbulent market, together with the inclusion of a balanced system approach to organisational management, envisages the expansion and integration of a number of organisational management systems, the so-called global management systems, namely: quality, environment, quality costs and finance, occupational health and safety, data security, social responsibility, knowledge and change (Tkaczyk, 2010). This context of organisational perception has a direct impact on the strategy formulation of a company operating in international markets.

In a quality-oriented enterprise, the adopted management path is thus shaped by the perception of its activities and processes, including: defining, operating and monitoring processes; obtaining information from the environment in order to modify and improve processes, developing and maintaining a high level of product quality. From the point of view of the organisation's managers, this form of management takes place at three levels: strategic, tactical and operational levels of the philosophy of management by quality (Hernas, Gajda, 2006; Dudek-Burlikowska, 2010; Tkaczyk, Dudek, 2001).

Referring to the described way of managing an organisation quality- focused, it is also essential to be aware of the creation of knowledge and intellectual capital. Consequently, perceiving quality not only through the prism of a product or service, but through the functioning of the entire organisation, thus achieving a defined and developed maturity of the management system based on quality and implementing the adopted organisational strategy.

3. A methodology for assessing the opportunities and threats of a manufacturing organisation in the context of strategic thinking – an author's proposal

The globalisation of markets and the dynamically changing environment has resulted in the need to implement such methods and tools of strategic management in organisations, which on the one hand would provide information for defining its strategy, thereby strengthening its market position, and on the other would influence the formulation of activities to improve its main, management and support processes. At the same time, a modern manufacturing company should also be aware of the importance of implementing the principles and form of self-assessment for the internal needs of the organisation and the possibility of appropriate use of the information obtained for the formulation of strategy. It is therefore obliged to determine the level of risk of its activities, and thus assess the opportunities and threats to the organisation.

At present, there are many proposals in the literature for the application of various forms of planning and thinking concepts referring to the implementation of scenario methods in the area of organisational management, above all in the area of strategic management and the perspective of creating plans for the future. One of the definitions of scenarios adopted in the literature indicates that scenarios are purposeful descriptions of how the environment regarding the activities and operations of interest to the organisation can shape and influence its future, in particular taking into account: a picture of the state of reality at the end of the scenario time as seen through the prism of the changing environment; interpretations of current phenomena and their impact on the future activities of the organisation; and a formulated picture of the organisation in the future time that it wants to achieve and strives for (van der Heijden, Bradfield, Burt, Cairns, Wright, 2002).

Identifying the most important intentions for which scenarios are created, namely: the adaptive learning of the organisation, the development of a strategy for the foreseeable future, the attempt to understand and describe incomprehensible situations (van der Heijden, 2000), it is right to exploit the research gap in the form of the lack of scenarios to assess the opportunities and threats of a quality-oriented organisation. The lack of scenarios is evident in the context of the analysis of the company's internal self-assessment criteria and in the further reasoning of the identification of goals for its internal development for increased competitiveness and activity in the markets.

Thus, the above considerations reinforce the conviction that the application of the proposed author's aspects of scenario methods - scenarios of possible events in a quality-oriented enterprise in a changing environment will be a good management practice. Thus, bearing in mind the need to link the non-formalised self-assessment of the enterprise (MSOP self-assessment model (Dudek-Burlikowska, 2019) with the development perspective, sheets of possible events were developed that add value to the information base when formulating the organisation's strategy. The criteria included in the scenarios were defined on the basis of the AHP multi-criteria analysis indicated in the author's publication (Dudek-Burlikowska, 2023) and their connotation was developed based on the literature, the author's knowledge and the experience of organisations participating in numerous surveys (Dudek-Burlikowska, 2019).

The definition of the attributes was preceded by an analysis in accordance with the Methodology for the Qualitative Grading of the Importance of Attributes/Factors, as well as they were verified in accordance with the proposal for the verification of the evaluation of the selection of criteria according to L. Keeney and H. Raiff (Goodwin, Wright, 2016) in terms of completeness, functionality, independence, lack of redundancy or minimum size.

On the other hand, the factors for the individual criteria included in the scenarios were defined on the basis of the AHP multi-criteria analysis indicated in the author's publications. In order to confirm the validity of the choice of attributes, correlations were also made on the basis of expert analysis of the tendencies of companies' market behaviour and literature research. Thus, the following results were obtained (Dudek-Burlikowska, 2019):

- *Customer orientation* is the proper development of the mutual organisation-customer relationship.
Confirmation in the literature, successively in: the TQM philosophy, the ISO 9001:2015 standard, the ISO 9004:2018 standard, the Quality Management Principles, and the Quality Function Development - QFD methodology.
- Organisational improvement is the awakening of the employees' need for self-improvement, development and awareness of the continuous improvement mindset.
Confirmation in literature, successively in: the Deming cycle, Kaizen philosophy, Gemba, ISO 9004:2018 standard and Quality Management Principles.
- Production process and technology management as an organisation's process orientation along the lines of prevent something that has not yet occurred, openness to technology innovation.
Confirmation in the literature, successively in: the ISO 9000 series standards, monitoring and controlling processes taking into account quality assessment methods, organisation models developed by H. Leavitt; L. Krzyżanowski; D. Katz and R.L. Kahn, the methodology of W. Shewart, J. Juran.
- The strategy and culture of the organisation is the creation of the organisation's strategy is the most important aspect of its success-oriented activities, nowadays the principles of ethics and the formulation of appropriate behaviour, established values in the organisation are an indispensable element of its strategy.
Confirmation in literature, successively in: Deming's principles, ISO 9000 series standards, the model of organisation by T.J. Peters and R. Waterman, the model of culture levels according to E. Schein, organisation culture as an element of success by M.E. Poter, business ethics - T. Garrett, R. Klonoski.
- Intellectual capital management, understood as the proper management of employees' knowledge, opportunities for development, mutual cooperation and employees' self-evaluation, are crucial for the optimal functioning of an organisation.
Confirmation in the literature, successively in: Maslow's hierarchy of needs, Quality Circles, benchmarking, quality management principles, TQM philosophy, organisation maturity.
- Quality management in the understanding that nowadays every success-oriented enterprise views each of its activities through the lens of quality.
Confirmation in the literature, successively in: the ISO 9000 series standards.
- Occupational safety and environmental protection in the context of creating appropriate working conditions and caring for the environment confirmed by the high level of maturity of a modern organisation.
Confirmation in literature, successively in: 5S methodology, aspects of corporate social responsibility, ergonomic principles.

In order to properly perceive the context of the individual attributes, their factors were constated according to the author's knowledge of the literature and experience (table 2).

Table 2.
Factors for individual attributes

Attribute	The statement of factors
A: CUSTOMER ORIENTATION	A1: <i>Proper definition and interpretation of customer requirements.</i> It has to do with every manifestation of customer-related activities, such as researching customer needs, defining and interpreting customer requirements, determining the type and frequency of customer contacts, and observing potential customers. A2: <i>Optimum product price.</i> Defining the level of sales to determine the price of the product at which the company will meet its objectives, including earning the maximum profit set. A3: <i>Complaint processing time.</i> Definition of procedures related to the time taken to process complaints. Analysis of complaints in terms of number, non-conformities and any objections from the customer. Development of procedures for warranty and post-warranty actions. A4: <i>Customer satisfaction survey.</i> Customer satisfaction survey, including having a procedure for measuring and implementing and verifying selected metrics. A5: <i>Timeliness of deliveries.</i> The organisation is obliged to be proactive according to the principle: delivering the product at the right time, in the right place, according to customer requirements. A6: <i>Flexibility of information flow between customer and organisation.</i> The client should specify with the organisation the forms and frequency of communication and the possibility and number of client audits. A7: <i>Formal aspect of dealing with customer property.</i> Have a formalised procedure for dealing with customer property. Identify forms of communication between workstations as to the fulfilment of the requirements in accordance with the order of the client in question.
B: PERFECTION ALENIE	B1: <i>Compatibility of processes with the organisation's objectives.</i> Processes are reviewed, including an assessment of their compliance with current plans and procedures in order to take corrective and preventive action. B2: <i>Innovation.</i> Innovation is a skilful response to change, whereby the organisation implements actions to improve the manufactured product or to develop a new, upgraded process, technology, machinery; it is also the management's recognition of the need for these changes and the ability to measure and evaluate the implementation of the transformations made. B3: <i>Assessing the impact of external and internal factors on the organisation's operating strategy, revising the strategy.</i> It is important for an organisation to develop the right relationship with its stakeholders and to be able to make proper use of information coming in from the downstream environment in order to review the organisation's strategy and objectives on an ongoing basis. B4: <i>Monitoring of organisational processes.</i> The monitoring of all the organisation's processes is primarily: the identification of outputs, the degree of use of machinery and equipment and the development of procedures for their proper supervision, the exploration and implementation of performance measures for activities and processes, including quality methods, techniques, tools and principles, and the analysis of problems in processes. B5: <i>Management and staff involvement in the implementation of improvement programmes.</i> Within the organisation, it is essential to involve human resources, including top management, tactical and operational level managers and employees, in the creation and implementation of improvement programmes, and it is important to have a high awareness of the need to identify with the organisation's activities. B6: <i>Organisational self-evaluation.</i> The organisation should objectively assess its processes and activities according to a chosen or developed cyclical pattern. It should be able to indicate its level of maturity. B7: <i>Training of staff at all levels.</i> A training system for employees at all levels needs to be developed, with a view to the proper development of the organisation and looking through the prism of achieving a high position in the market while meeting customer requirements.

Cont. table 2.

C: STRATEGY AND CULTURE OF THE ORGANISATION	C1: <i>Monitoring the environment.</i> Monitoring the environment should consist of collecting and verifying information and subjecting it to continuous analysis, taking into account information from the closer and further environment. Responding flexibly to changes, to the dynamics of the environment, assessing the impact of external and internal factors on the organisation's activities, thereby facilitating the definition of appropriate solutions identical to the organisation's strategy and, if necessary, revising it. C2: <i>Stability of the organisation.</i> Stability is about developing the credibility and sustainability of the organisation, achieving a phase of certainty and constancy in the life cycle of the organisation to achieve the objectives set and to accumulate a group of regular customers. C3: <i>Strategy-process relationship.</i> The definition of processes and their execution must be strongly positively correlated with the organisation's strategy. C4: <i>Mission and vision versus organisational values.</i> The proper definition of an organisation's mission and vision influences the perception of its values. The mission is supposed to precisely reflect and express the company's distinctiveness, building its image, it should define the organisation's basic objective and testify to the sense of activity, the <i>raison d'être</i> and development of the organisation. The vision is supposed to characterise the organisation in the future, representing its potential model for long-term action. C5: <i>The organisation's ethics programme/</i> Organisational ethics is above all the identification of an entity's employees with a defined code of ethical conduct. The code should be a formalised document indicating the core values recognised by the company and expected by the employees, while at the same time giving them a degree of freedom in decision-making. It is important to emphasise that all employee groups should be consulted on the document. C6: <i>Social responsibility.</i> Corporate social responsibility is one of the factors that contribute to gaining a competitive advantage on the market; it is a strategic element of organisations. Enterprises should take into account in their activities economic aspects on an equal footing with social and environmental aspects, and should try to function in a way that maintains a balance in these areas. When creating corporate social responsibility, it is important to remember about its proper planning, implementation and familiarisation of employees at all levels, as well as proper communication within the organisation and with the external environment. C7: <i>Empathy among employees.</i> Top management is responsible for the right attitude towards employees, the development of a work motivation system, the right attitude towards opportunities for self-fulfilment and decision-making in accordance with their position. The atmosphere among employees influences the relationship between employees, the relationship of employees with customers, suppliers, stakeholders and the socio-economic environment, and thus the achievement of the organisation's objectives.
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Cont. table 2.

D: PRODUCTION PROCESS AND TECHNOLOGY MANAGEMENT	D1: <i>Production resources.</i> Production resources are the backbone of the functioning of a production system. It is essential to plan the number of people employed with the right qualifications, skills and experience, to determine the machines and equipment suitable and necessary for the manufacturing process of products, to select the materials needed for production. D2: <i>Design of processes and products.</i> Design activities should be a priority for the organisation. According to the principle of prevent what has not yet occurred, the proper definition of aspects of the pre-production sphere and, in particular, the design of processes and products, allows to minimise defects in the technological process. D3: <i>Attractiveness of the technology.</i> Technological upgrading should be systemic, as far as economic possibilities and intellectual capital are available. Proper understanding and implementation of new technological solutions in production will potentially reduce its costs. Developing a form of technology management will increase the organisation's research and development activity, raise awareness of the importance of deciding not to use technologies that are already obsolete, while at the same time influencing the perception of the enterprise as a competitive unit, open to new solutions and thus dynamically developing in the market. D4: <i>Controlling the production process.</i> The identification of the need to control the production process demonstrates a correct perception of the importance of monitoring the production process using quality assessment techniques, tools and methods. In addition, it allows for the documentation of the variability of production processes and product characteristics. The aspects indicated serve to optimise the process, reduce its defectiveness and, at the same time, allow for the assessment of its capability and stability and thus shape the quality of the final product. D5: <i>Information systems in production.</i> The conscious implementation of IT through the implementation of IT tools has the effect of improving the management of production, management and support processes. These tools are intended to facilitate the planning of the organisation's activities and their monitoring, and to increase the flow of information between the various levels of management. D6: <i>Logistics processes.</i> The processes associated with logistics, broadly perceived, are responsible for the proper transfer of information, raw materials, materials, as well as human, financial resources within an organisation. Each of these aspects should take place according to the Just in Time philosophy. It is also advisable to define a logistics system that facilitates the functioning of the organisation. D7: <i>Compliance of products with requirements.</i> The organisation should view compliance with requirements as the manufacture of a product adequately to a defined technical specification, according to defined quality standards, standardisation standards, internal organisation documentation, potential required EU directives, and in accordance with an order from the customer.
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Cont. table 2.

E: INTELLECTUAL CAPITAL MANAGEMENT	E1: Relationship strategy - hr methodology. The strategy-HR methodology relationship refers to the emphasis within the organisation on the coherence between the human resource management methodology adopted and the organisation's strategy. It is important that employees, according to their job position, are familiar with the organisation's objectives and thus identify with the defined activities of the company. E2: Staff competence. Employees' skills should be closely related and consistent with their job position. The HR department should have defined procedures for identifying employees' professional and personal skills. E3: Human relations. Conscious sharing of one's own knowledge, joint problem-solving and the ability to work as part of a team are evidence of the creation of a modern, intelligent organisation focused on success. E4: Employee self-assessment. Recognising the need for self-evaluation procedures for employees are processes used by developed organisations that have implemented the concept of total quality management and thus define their own level of maturity at a very high level. The organisation should strive for this level. E5: Staff appraisal system. The organisation should have a systematic solution in place for evaluating employees. This system should be based on a comparison of the employee's performance with the tasks and competencies defined for the job he or she holds. The appraisal system is to be linked to the other elements of human resource management, strategy and culture of the organisation. It is intended to add value, used in the management process and created by comparing the qualities, qualifications, behaviour or performance of the employee with those achieved by other employees or with a defined benchmark. It is advisable to have a system of ongoing and periodic appraisal of employees appropriate to each group of employees. E6: Staff development path. Employees should know the opportunities for their own development within the organisation. A properly formulated path for each group of employees remains known within the organisation. The motivation system should be linked to job satisfaction. E7: Motivation system. Nowadays, when defining a motivation system, an organisation is aware that an employee is its internal customer, and therefore the motivation system built should be based on so-called financial aspects, such as pay, discretionary bonuses, cash rewards, and non-financial aspects, such as promotion, training opportunities.
ATTRIBUTE F - QUALITY MANAGEMENT	F1: Identification of input and output data. An important aspect of the proper functioning of an organisation's processes is the definition of the source of input and output, as well as the input and output of the recipients, together with a description of the appropriate action. F2: Process relationship - quality strategy. For the organisation, the indicated relationship should mean a proper correlation between the shaped process map and the developed organisational strategy, quality goals and quality policy. F3: Audits. Audits in the organisation are carried out according to an established audit schedule (internal audits) and dates agreed with the certification body (external audits). F4: PDCA Methodology. The organisation is aware that the PDCA cycle should be mandatory throughout the company for each process. F5: Accessibility to QMS documentation, flow of information. The form of information flow is a specific structure developed by an organisation. The information gathered and accumulated in the company constitutes a set of knowledge necessary for decision-making (know-how), which is why it is so important to develop an information flow system. Thanks to established procedures and tools, information goes directly to designated employee groups and allows for more effective exchange and transformation of transmitted data. F6: Management review. The organisation should consider management reviews as an added value of the company's activities and an indispensable element of improvement. The purpose of a review is for top management to verify the functioning of the existing, formalised management system in order to confirm its adequacy, suitability and effectiveness, and thus to be able to indicate changes. Each review should be properly planned and conducted. It is advisable to prepare the input data (collection of information) and then collect the data to evaluate and determine the final effect of the output data. It is important to carry out reviews at set intervals. F7: Quality assessment methods for processes. Quality methods and techniques are an effective tool needed to control, monitor, optimise and improve all the organisation's processes. The selection of quality methods and techniques should be appropriate to the nature of each process and cover the entire product life cycle. The implementation of quality assessment methods is a necessity in organisations focused on success, quality and meeting customer requirements.

Cont. table 2.

G: SAFETY AT WORK AND ENVIRONMENTAL PROTECTION	G1: Internal and external communication. Internal and external communication in the area of health and safety and environmental protection indicates the need for the organisation to develop an information flow system that includes data on potential hazards arising from the job covered, how to prevent and deal with possible accidents and descriptions of how to respond in the event of possible accidents at work. G2: Ergonomics of workstations. It is the task of top management to define the working environment in an optimal way for each employee, taking into account both physical safety and the opportunity for intellectual, mental and social development. The working conditions developed should be analysed, reviewed and improved according to current needs. G3: Occupational risk analysis. Risk assessment is a must in a modern organisation. According to it, it should define the hazards, assess them for each workplace in order to minimise the likelihood of harm to workers' health. When assessing occupational risks, a company is obliged to develop so-called 'risk assessment sheets' containing information on the type of hazard, measures to reduce occupational risks, forms of risk assessment and recommendations for the implantation of additional protective measures. G4: Policies, procedures, guidelines. Adherence to rules and guidelines related to process safety is the responsibility of all employees, and it is also important to participate in the training provided and planned by the organisation's management according to the nature of the work. G5: 5S methodology. The implementation of 5S is aimed at changing the habits and behaviour of employees so that they carry out their activities in an orderly and well-organised workplace. The implementation of the 5S principles improves work efficiency, reduces operating costs, stabilises organisational processes and thus influences product quality. G6: Waste. Minimising waste allows savings within the organisation and the development of correct relations with the social environment. G7: Noise, vibration, pollution. Monitoring noise, vibration and pollution levels is the responsibility of every organisation in accordance with current norms and standard.
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Source: Dudek-Burlikowska, 2019.

At a further stage, in the context of shaping the correlation between the management of a contemporary organisation and the creation of its strategic approach, the author's worksheets possible events were proposed for determining the change of a factor for the better - the strength of positive influence (opportunity) and the deterioration of the situation - the strength of negative influence (threat), as well as the author's own assessment scale used referring to similar forms of defining scale in the literature on strategic analysis of enterprises (Table 3).

Table 3.

Scale of evaluation of potential negative and positive impact by point and meaning

The power of positive influence	6	Maximum
	5	Very large
	4	Large
	3	Average
	2	Small
	1	Minimum
The strength of the negative impact	-1	Non-stitute
	-2	Small
	-3	Average
	-4	Large
	-5	Very large
	-6	Critical

In a further stage of the work, a table for trend analysis was formulated (Table 4) and a form for the most positive scenario, most negative scenario and most likely scenario (Figure 6) in the assessment of the organisation was designed, as well as a template for a graph of the strength of influence of a group of criteria (Figure 5).

Table 4.
Trend analysis of attributes and factors

Attributes and factors	Trend	The power of influence	PW *
Attribute A: CLIENT ORIENTATION			
A1: Proper definition and interpretation of customer requirements	PROGRES		
	EQUILIBRIUM		
	REGRESS		
A2: Optimum product price	PROGRES		
	EQUILIBRIUM		
	REGRESS		
A3: Complaint processing time	PROGRES		
	EQUILIBRIUM		
	REGRESS		
A4: Customer satisfaction survey	PROGRES		
	EQUILIBRIUM		
	REGRESS		
A5: Timeliness of deliveries	PROGRES		
	EQUILIBRIUM		
	REGRESS		
A6: Flexibility of information flow on organisation – Client interface	PROGRES		
	EQUILIBRIUM		
	REGRESS		
A7: Formal aspect of proceedings with customer Property procedure	PROGRES		
	EQUILIBRIUM		
	REGRESS		
Attribute B: ORGANISATION DEVELOPMENT			
B1: Compatibility of processes with assumptions organisations	PROGRES		
	EQUILIBRIUM		
	REGRESS		
B2: Innovation	PROGRES		
	EQUILIBRIUM		
	REGRESS		
B3: Assessing the impact of external factors and internal to the action strategy organisations, revision of strategy	PROGRES		
	EQUILIBRIUM		
	REGRESS		
B4: Monitoring of organisational processes	PROGRES		
	EQUILIBRIUM		
	REGRESS		
B5: Management commitment and staff in the implementation of improvement programs	PROGRES		
	EQUILIBRIUM		
	REGRESS		
B6: Organisational self-evaluation	PROGRES		
	EQUILIBRIUM		
	REGRESS		
B7: Employee training all levels	PROGRES		
	EQUILIBRIUM		
	REGRESS		

Cont. table 4.

Attribute C: ORGANISATION STRATEGY AND CULTURE			
C1: Monitoring the environment	PROGRES		
	EQUILIBRIUM		
	REGRESS		
C2: Stability of the organisation	PROGRES		
	EQUILIBRIUM		
	REGRESS		
C3: Strategy-process relationship	PROGRES		
	EQUILIBRIUM		
	REGRESS		
C4: Mission and vision versus values organisations	PROGRES		
	EQUILIBRIUM		
	REGRESS		
C5: The organisation's ethics programme	PROGRES		
	EQUIVALENCE		
	REGRESS		
C6: Social responsibility	PROGRES		
	EQUIVALENCE		
	REGRESS		
C7: Empathy among employees	PROGRES		
	EQUILIBRIUM		
	REGRESS		
Attribute D: MANAGEMENT OF PRODUCTION PROCESSES AND TECHNOLOGY			
D1: Production resources	PROGRES		
	EQUILIBRIUM		
	REGRESS		
D2: Process and product design	PROGRES		
	EQUILIBRIUM		
	REGRESS		
D3: Attractiveness of the technology	PROGRES		
	EQUILIBRIUM		
	REGRESS		
D4: Process control	PROGRES		
	EQUILIBRIUM		
	REGRESS		
D5: Information systems in production	PROGRES		
	EQUIVALENCE		
	REGRESS		
D6: Logistics processes	PROGRES		
	EQUILIBRIUM		
	REGRESS		
D7: Compliance of products with requirements	PROGRES		
	EQUILIBRIUM		
	REGRESS		
Attribute E: INTELLECTUAL CAPITAL MANAGEMENT			
E1: Strategy-HR methodology relationship	PROGRES		
	EQUILIBRIUM		
	REGRESS		
E2: Staff competence	PROGRES		
	EQUILIBRIUM		
	REGRESS		
E3: Human relations	PROGRES		
	EQUILIBRIUM		
	REGRESS		

Cont. table 4.

E4: Employee self-assessment	PROGRES		
	EQUILIBRIUM		
	REGRESS		
E5: Staff appraisal system	PROGRES		
	EQUILIBRIUM		
	REGRESS		
E6: Staff development path	PROGRES		
	EQUILIBRIUM		
	REGRESS		
E7: Motivation system	PROGRES		
	EQUILIBRIUM		
	REGRESS		
Attribute F: QUALITY MANAGEMENT			
F1: Identification of input data and output	PROGRES		
	EQUILIBRIUM		
	REGRESS		
F2: Process-strategy relationship qualitative	PROGRES		
	EQUILIBRIUM		
	REGRESS		
F3: Audits	PROGRES		
	EQUILIBRIUM		
	REGRESS		
F4: PDCA methodology	PROGRES		
	EQUIVALENCE		
	REGRESS		
F5: Accessibility to QMS documentation, flow of information	PROGRES		
	EQUIVALENCE		
	REGRESS		
F6: System overview	PROGRES		
	EQUILIBRIUM		
	REGRESS		
F7: Quality methods and tools for processes	PROGRES		
	EQUILIBRIUM		
	REGRESS		
Attribute G: WORKPLACE AND ENVIRONMENTAL PROTECTION			
G1: In - ex comms for health, safety & environmental protection	PROGRES		
	EQUILIBRIUM		
	REGRESS		
G2: Ergonomics of workstations	PROGRES		
	EQUILIBRIUM		
	REGRESS		
G3: Occupational risk analysis	PROGRES		
	EQUILIBRIUM		
	REGRESS		
G4: Compliance with rules and guidelines for safety in processes	PROGRES		
	EQUILIBRIUM		
	REGRESS		
G5: 5S methodology	PROGRES		
	EQUILIBRIUM		
	REGRESS		
G6: Minimising waste	PROGRES		
	EQUIVALENCE		
	REGRESS		
G7: Level monitoring noise, vibration and pollution	PROGRES		
	EQUILIBRIUM		
	REGRESS		

*PW - probability of an event occurring, 0-1 means that the sum of the probabilities in the group - progress, equilibrium, regress is to be 1.

Source: own elaboration (Dudek-Burlikowska, 2019).

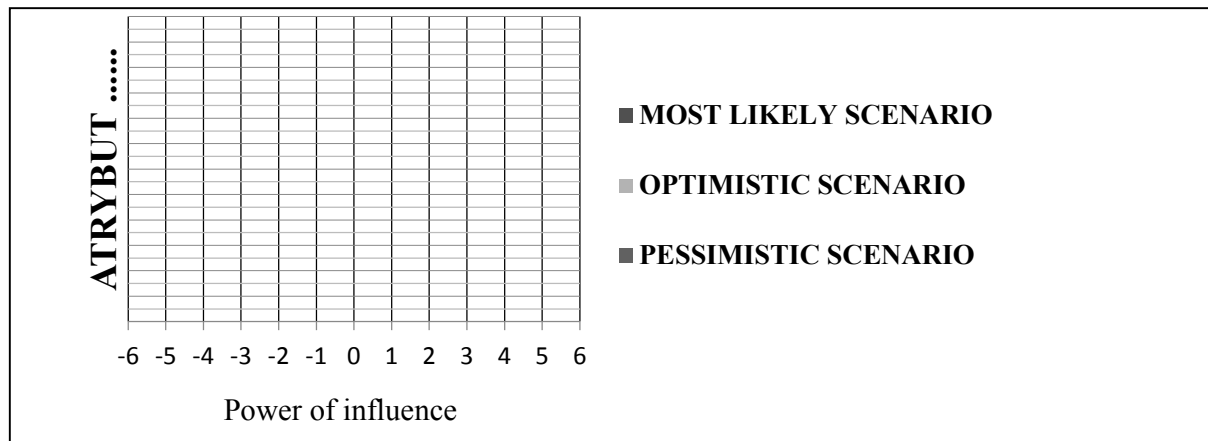


Figure 5. Pattern of the criteria group influence diagram.

			ATTRIBUTES AND FACTORS																											
			Attribute A							Attribute B							Attribute C													
A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	C5	C6	C7										
SP	THE POWER OF INFLUENCE																													
SO																														
SNP	PW																													
	THE POWER OF INFLUENCE	POSITIVE																												
		NEGATIVE																												
			Attribute D							Attribute E							Attribute F													
			D1	D2	D3	D4	D5	D6	D7	E1	E2	E3	E4	E5	E6	E7	F1	F2	F3	F4	F5	F6	F7							
SP	THE POWER OF INFLUENCE																													
SO																														
SNP	PW																													
	THE POWER OF INFLUENCE	POSITIVE																												
		NEGATIVE																												
			Attribute G																											
			G1	G2	G3	G4	G5	G6	G7																					
SP	THE POWER OF INFLUENCE																													
SO																														
SNP	PW																													
	THE POWER OF INFLUENCE	POSITIVE																												
		NEGATIVE																												

4. Conclusions

The presented proposal for the implantation of scenario sheets of possible events in an organisation quality-focused and success, is a modern perspective on the expansion of input data for the formulation of the strategy of a manufacturing organisation.

Using the defined attributes and factors, it will be possible to demonstrate the correlation between the estimated risks and opportunities and threats of a manufacturing organisation. In this regard, an important strength of the organisation is its ability to create knowledge on the basis of, among other things, the proposed methodology, with the simultaneous involvement of employees at all levels in the daily activities to achieve the defined strategic, tactical and operational objectives, as well as its expansiveness in the search for ways to improve. By developing the proposed analysis in the organisation, it is possible to transform the organisation's weaknesses into strengths, thereby reducing threats and increasing opportunities in a dynamic environment.

The integration of quality management and strategic management in a manufacturing organisation, and thus indicating to organisations the possibility of implementing scenario sheets of possible events (Figure 6), thus form the basis for analysing the impact of the environment on the organisation through the prism of opportunities and threats and risk estimation.

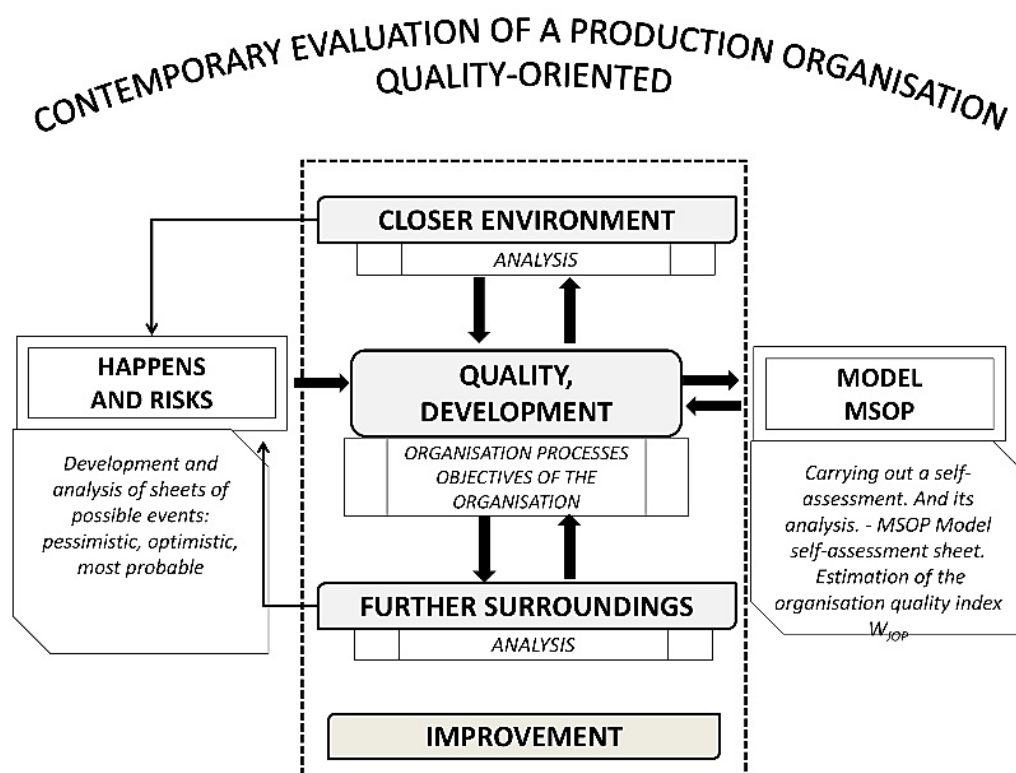


Figure 6. Perceptions of a contemporary quality-focused organisation.

The modern form of creating a manufacturing organisation is actually a series of defined assumptions and implemented activities that interact and influence each other, so that changes in one area have repercussions in other aspects of its functioning and improvement.

The pursuit of organisational success and a high market position is therefore the conscious organisation management, characterised by: continuous action, the right relationship between the organisation and the customer, the importance of valuing the creative thinking of employees, the implementation of the organisation's strategy, the maintenance of high quality processes and products.

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