ENTREPRENEURSHIP AND SUSTAINABILITY ISSUES
ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

Publisher
http://jssidoi.org/esc/home

THE MODEL OF AN ORGANIZATION PERFORMANCE MEASUREMENT IN THE CONTEXT OF SUSTAINABLE SYSTEM MANAGEMENT*

Aneta Wysokińska-Senkus

War Studies University, Al. gen. Antoniego Chruściela "Montera" 103, 00-910 Warsaw

E-mail: aneta.senkus@gmail.com

Received 20 September 2019; accepted 23 November 2019; published 30 March 2020

Abstract. The modern world poses many challenges to organizations, which are associated with changes in economic reality. The continuous changes in their environment create many new possibilities, which, if properly used, can contribute to a success of an organization but a delayed response to the same changes may cause a huge risk. The organizations are seeking the frameworks to comply with requirements in the different areas including legal, social, economic or ecological environment that would allow to manage and measure the performance of the organization as system. The following paper provides the solution for the organization – the sustainable system management framework based on research either management experts or organizations leaders that covers all phases from stakeholder identification and analysis through the sub-targets setting and the relations amongst in the key perspectives of organization's operation: legal, economic, social and ecological; to the methods of measuring organization performance.

Keywords: sustainability; management systems; performance; performance measurement

Reference to this paper should be made as follows: Wysokińska-Senkus A. 2020. The model of an organization performance measurement in the context of sustainable system management. *Entrepreneurship and Sustainability Issues*, 7(3), 1819-1831. https://doi.org/10.9770/jesi.2020.7.3(25)

JEL Classifications: M10, M14, M20

Additional disciplines: ecology and environment

1. Introduction

The modern world poses many challenges to organizations, which are associated with changes in economic reality. The continuous changes in their environment create many new possibilities, which, if properly used, can contribute to a success of an organization but a delayed response to the same changes may cause a huge risk.

* *The research was supported by Academy Of War Art, Poland*

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

Organizations in the decision-making process should diagnose many aspects of their business operations and their business strategies: economic, social, environmental and ethical ones (related to the human and consumer rights) and then they should determine key objectives in these areas.

According to P. F. Drucker, the management process requires a comprehensive system of indicators, which allows monitoring, evaluating and improving operational efficiency continuously and comprehensively. The set of such financial, economic, social and market indicators has to be adapted to a given organization.

The enrichment of a strategy of an organization with a set of indicators, which allow assessing its effectiveness, is a prerequisite for a success in the dynamically changing environment (Senkus, 2014).

2. Sustainable System Management

The term "Sustainable system management proposed by the author (Wysokinska-Senkus, 2013) could be based on the concept of system thinking. The system thinking concept has been created by Peter Senge and since then, is the foundation of building a learning organization. Senge have distinguished five disciplines of learning organizations, that include:

- Building a Shared vision – creating a clear and specific goal of the organization, a true and actual vision that is known to all members of the organization and which promotes learning processes;
- Systems Thinking – perception of all individual phenomena in the category of whole processes or structures, perception of interdependencies and feedback (when the phenomenon affects its own future);
- Mental Models – ability to critically approach rooted beliefs, values, stereotypes or patterns of thinking and acting and to make them aware, analyze, change or reject them;
- Team Learning – the teams, not the individuals, are the basic learning cells. The band is a greater carrier of intellectual potential than its individual members put together;
- Personal Mastery – a process of continuous improvement in both formal professional skills and in moral and mental abilities, thanks to which one can set goals and a vision of ones life.

According to Senge, system thinking is a key discipline of a learning organization that underlies the other learning disciplines of an organization that integrates and strengthens all the above-mentioned disciplines. He emphasizes the fact that *"the whole can exceed the simple sum of the parts". All are concerned with a shift of mind from seeing parts to seeing wholes, from seeing people as helpless reactors to seeing them as active participants in shaping their reality, from reacting to the present to creating the future. „As the fifth discipline, systems thinking is the cornerstone of how learning organizations think about their world." (Senge 1990).*

The essence of the discipline of systemic thinking is to change the way of thinking consisting in seeing multidirectional mutual relations instead of linear cause-and-effect chains, seeing change processes.
D. Hoyle, author of the book "ISO 9000 Quality Systems Handbook - Using the standards as a framework for business improvement" assumes that the management system in an organization may consist of many partial subsystems improving the organization's operation in specific areas. Standardized management systems can be considered narrower than systemic management, but by implementing a specific management system in line with the requirements of ISO 9001, ISO 14001, OHSAS and others, the goals set by Senge can be achieved.

Nowadays an organization is required to consider a wide spectrum of aspects such as quality, environment, occupational health and safety on the way to the implementation of standardized systems. This multi-faceted approach brings the organization closer to achieving success in order to achieve sustainability.

So where do you look for organizations that are system managed? Based on Hoyle's observations, it can be assumed that organizations that have been certified in management systems are systematically managed. These

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)
are organizations that constantly implement new management systems that allow for more effective management of many aspects of functioning, e.g. environmental, occupational health and safety management, food safety, relations with organization's stakeholders, etc. in order to find a path to sustainability, identified with balanced success. So, if you want to diagnose system-managed organizations, you can look for them among those that have implemented and certified management systems.

Since Senge's system management definition is too general and applicable in many areas, such as physics, sociology, engineering and management, the author decided to specify it and refer the term directly to the organization's management.

System management is management based on the use of the principles of system thinking, consisting in perceiving mutual relations between individual aspects of the organization's functioning and the external environment (and therefore all the stakeholders of the organization), taking into account changes over time, as well as analyzing the causes and effects of these changes and focusing on these which are of key importance for organizations in the legal, economic, social and environmental dimensions with a focus on sustainability and innovation.

The author includes the following aspects of the organization's functioning: processes, resources (human, financial, material and information), elements of organizational culture, organizational strategy, organizational goals, relations with stakeholders and the natural environment. The prerequisite for implementing system management is the identification of all processes in the organization.

Based on the conducted literature studies and the field studies (Wysokinska-Senkus, 2013; Senkus, 2017) the author adopted the assumption that organizations that have implemented quality, environmental and occupational health and safety management systems take into account a wide spectrum of aspects focused on quality, the environment, occupational health and safety, and this multi-faceted approach brings the organization closer to achieving success on the road to implementation of sustainability.

The following sustainable system management principles could be defined:

- measuring the effectiveness of the organization on many levels,
- identification of key processes in the organization,
- cause and effect analysis of interrelationships between processes in the organization,
- identification of strategic control points (SPK - action, place which is particularly important from the point of view of improving the efficiency of the organization),
- identification of causes and effects of irregularities in SPK,
- designing monitoring methods and accountability regarding strategic checkpoints,
- designing corrective and preventive actions at strategic checkpoints,
- analyzing the links between the organization's strategy and the SPK,
- organization resource efficiency analysis,
- identification of key Stakeholders of the organization and assessment of the degree of organization's impact on individual Stakeholders,
- developing a model of mutually beneficial relations with stakeholders,
- supporting teamwork and project orientation,
- increase of the organization's innovativeness.

Effectiveness in the implementation of system management is possible if the organization constantly undertakes actions aimed at continuous improvement of its individual elements, processes, resources, methods and management techniques, and develops mutually beneficial relations with the broadly understood environment of the organization. The condition for designing a comprehensive system for measuring the effectiveness of an organization is to make an insight in accordance with the concept of system management.

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

System management by analyzing the functioning of organizational elements and the interrelationships that occur between them, minimizes the risk of errors and inconsistencies, and is a preventive method that eliminates the causes of problems before they occur.
The basic aspects of the social system include:

- trust,
- common meaning, diversity,
- ability to learn
- and the ability to self-organize (Missimer, 2017).

3. The essence of organization performance measurement

The problem of organization performance is an issue, which is extremely interesting and still in the focus of research; it is also particularly important for economic practice since any increase in effectiveness is a key objective for any organization. The measurement of management effectiveness with an indication of methods is particularly important for small and medium-sized enterprises. Organizations must be aware that operating in a turbulent environment forces the process of monitoring and evaluating results of activities of organizations.

The measurement of organization performance is recognized as a key element to improve business performance (Sharma et al., 2005). An effective system for measuring management effectiveness should be balanced and dynamic; it should be a dynamic system, which helps to support decision-making processes through collecting, compiling and analyzing information (Neely et al. 2002).

The system for measurement of organization performance considering all aspects of the organization and individual perspectives allows for creating a holistic picture of the given organization (Kaplan et al., 1996) (Neely et al., 1995).

Every organization is a set of interrelated elements, which are mutually dependent on one another. If there is any change in any of the components, which create the organization, the entire organization must be changed. Rummler and Brache (2000) say that organization performance can be considered in three perspectives:

- The organizational level: it is on the organizational level that the following factors affecting the effectiveness can be distinguished: strategy, objectives on various levels of the organization, measurement methods, organizational structure and use of resources.
- The level of the process: it is on the level of the process that the following variables, which affect the efficiency of organizations, can be distinguished: interrelations among processes among individual departments, such as: development of new products, supply process, production process, sale and distribution.
- The workstation level: the variables determining organization performance at this level include: methods for recruitment and promotion, tasks and responsibilities, applicable labor standards, communication systems amongst employees and a motivation system for employees.

Rummler A. and Brache A. P. (2000) present nine variables affecting organization performance, which are shown in the diagram below and which arise from overlapping of two dimensions of the concept of effectiveness.

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

Table 1. Variables conditioning organization performance

	NEED OF EFFECTIVENESS			
EFFECTIVENESS LEVELS		Objectives	Way of planning	Way of managing
	Organizational level	Objectives of the organization	Designing the organization	Management of the organization
	Level of the process	Objectives of the process	Designing the process	Management of the process
	Workstation level	Objectives of the workstation level	Designing the workstation level	Management of the workstation

Source Rummler A., Brache A.P., Podnoszenie efektywności organizacji. (Increasing organization performance) PWE, Warsaw 2000, p. 46.

According to A. Rummler and A. P. Brache (2000), the effectiveness management includes collection of information on evaluation of products and services of a given organization carried out by customers; evaluation of real operations of the organization according to the basic evaluation criteria, which result from objectives of the organization; giving feedback on the results to the relevant subsystems of the organization; taking corrective actions; changing the objectives of the organization as a result of changes in the environment.

Organizations should be managed in a dynamic way, which consists in monitoring internal and external factors affecting functioning and in analyzing objectives and priorities of the organization (Bititci, Turner, 2000). A prerequisite to measure organization performance is to identify the factors, which affect it at all management levels in the organization.

Ittner, Larcker and Randall (2003), Gates (1999) and Otley (1999) include the strategy of the organization in the measurement of organization performance. The measurement of the effectiveness includes developing the strategy and setting targets in order to improve the effectiveness on the basis of the analysis of the results of the measurement of the degree, to which the targets have been achieved.

Two important aspects related to effectiveness of an organization should be considered, which are measurement and management of the effectiveness. According to Ittner, Larcker and Randall (2003), Gates (1999) and Otley (1999), the effectiveness management (efficiency) is a set of actions, which consist among others in setting targets and developing strategies, planning process in the organization, whose core element is decision-making, implementing plans and evaluating the implementation degree of the set targets and/or strategies. Despite the fact that some authors (Johnson and Broms, 2000) refer to a significant role of management basics in relation to effectiveness indicators, it seems to be clear that the effectiveness measurement system may shape "the information system, which is the core of the effectiveness measurement process and integrates all relevant information from all management systems in the organization" (Bititci et al., 1997).

Rose claims that "the measurement of results is the language of the progress in the organization. It shows the point, at which the given organization is and which position it takes. It functions as a guide and says, if the organization is on its way to meet its targets. It is also a powerful behavioral tool, since it reminds the employees, what is important and what should be taken into consideration in order to meet the targets of the organization" (Rose, 1995).

A holistic performance measurement system should assume a systemic approach to management assuming challenges and threats that appear in the environment (Sardi et al. 2018).

Future research should be conducted to improve the performance of nonprofits and public administration. Research to develop performance measures that reflect social approaches should be a very important mainstream

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

of research in organizational performance, in particular measures of social value creation and social impact as well as all intangible results that affect an organization (Månsson, 2019).

Lebas and Euske (2002) are the creators of an organization performance model in the social dimension, in which the following assumptions were made:

- Performance can be described with a set of parameters or indicators, which supplement one another and are opposing to one another in some cases. These parameters describe and evaluate the process of obtaining results of the organization;
- In particular, the consideration of the performance should be focused on current activities of the organization and on the analysis of their impact on the organization in future that implies that the performance measurement is a process characterized by a certain dynamic;
- The way of approach to the concept of the performance in the social dimension depends on the member of the organization, who defines the performance in his own way;
- The performance evaluation depends on, whether it is carried out from the external or internal perspective of the organization;
- Efficiency is always associated with responsibility;
- One can speak about efficiency, when it can be described and/or its results can be measured in order to interpret them and to take effective decisions on this basis;
- The performance indicators used in the organization should be incessantly assessed from the internal and external perspective of the organization;
- The performance measurement should not be identified with the activities, which are partially described by it;
- Effectiveness is a subjective concept, which requires evaluation and interpretation, and which affects the results and processes depending on the adopted measures and assumptions.

3. The Sustainable System Management performance improvement model

The author of the paper proposed a multi-dimensional model of system management improvement in an organization. The process of constructing the proposed sustainable system management performance improvement model S-HPD&I system improvement management model was preceded by in-depth literature studies on several hundred literature sources and consultations with thirty-five management experts, which included six management professors, ten members of leading Polish and foreign supervisory boards organizations: small, medium and large, and nineteen business consultants: including management analysts, business process analysts and auditors of leading management systems. Than the model was tested during the research done on the 180 organizations from public and private sector that have implemented at least three management systems for example quality management system, environmental management system, occupational health and safety or other.

ENTREPRENEURSHIP AND SUSTAINABILITY ISSUES
ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

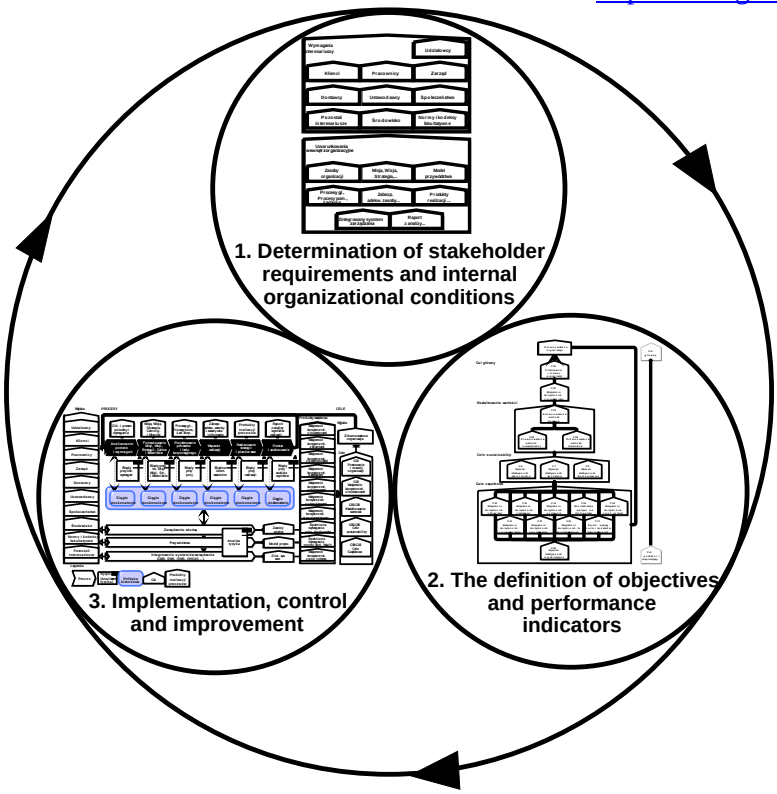

Fig.1. Strategic Holistic Performance Development and Improvement (S-HPD&I)
Source: Compiled by author

The model of the system management improvement - The Strategic Holistic Performance Development and Improvement (S-HPD&I) consist of three phases:

- Identifying stakeholders' requirements and internal conditions in the organization - Phase 1;
- Defining objectives and performance indicators - Phase 2;
- Implementation, monitoring and improvement - Phase 3.

The key element for a success of any new venture is to identify the needs of stakeholders, which are the base for determining evaluation criteria for the given project. The determination of stakeholders' requirements reveals potential risks and opportunities of the project. The tool most often used in this respect is the classic analysis of stakeholders. When the organization is aware of the specific requirements of stakeholders, of potential opportunities and risks, the set of the internal conditions in the organization, which may support or hamper the implementation of the venture, should be determined.

It is amongst stakeholders' requirements that the following ones were included in the model: of shareholders (or owners), of customers, of employees, of the board of directors, of suppliers, of legislators, of the society and other stakeholders; it was also decided to distinguish the natural environment (where the mandatory and voluntary obligations of the organization were included) as well as standards and non-obligatory codes (where the obligations of the organization resulting from the application of the standards and non-obligatory codes were included).

It was attempted to create a complete list of stakeholders, with whom organizations maintain most frequent contact and then the studied organizations were asked about the importance of the requirements of individual stakeholders. The following groups of stakeholders were distinguished: Customers, employees, suppliers,

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)
competitors, financial institutions; business centers (local, regional, etc.); state authorities; shareholders; other business entities (internal exchange of information within a company); supervisory council; business support institutions; business associations; trade unions; groups of special interests (lobby); Media; local communities; innovation clusters; universities and research institutes.
In the group of internal conditions in a company, there are distinguished:

- Resources of an organization: the aim is to inventory the resources of the organization in order to obtain the information, if the targets set for the next phase do not exceed the capabilities of the organization.
- Mission, vision, strategy, targets of an organization and indicators - existing ones: mission, vision, strategy, targets and indicators chosen for the organization may encourage or hinder the implementation of new initiatives.
- Model of leadership: like factors mentioned above, the model of leadership may encourage or hinder the implementation of new initiatives.
- Main processes, support processes, corporate governance (Corporate governance is understood as a structured management framework, which includes mutual relations among organization elements: systems, processes and resources, which contribute to optimizing activities within the organization and promoting ethical and responsible decision-making) - it is at this stage that it is considered if the processes were distinguished and what is the ability of the organization to meet the targets through processes.
- Securing adequate resources and information management principles - the ability to secure adequate resources in relation to the ongoing tasks and information flow is analyzed here. The aim is to analyze if the organization is able to provide resources for the implementation of the projects, if it has not got them. Whereas, the way of the information management is sometimes a critical success factor.
- The products of implementation of processes - the aim is to determine if and to what extent the existing products of implementation of processes meet the requirements of stakeholders.
- Integrated management system - the aim is to determine the management system, if it is integrated, if the adopted rules support the implementation of the objectives at different levels.
- The report on the analysis of the implementation results - the aim is to determine possible difficulties, which can be faced by the organization, while accomplishing the tasks.

It should be noted that the correct identification of the internal conditions within the organization provides information, where potential problems may appear and which elements should be changed in order to be able to pursue new challenges.

The results of the studies carried out indicate that 78% of organizations recognized actions aiming at a constant analysis of the market as a key factor for the success of their activities and the importance of this factor (WRO) was rated at 0,8. The market analysis helps the organization to monitor all changes, which occur in the environment and to take actions on a regular basis aiming at adapting to changes and exploiting opportunities that arise from them.

Error! Reference source not found. it shows that both in case of organizations, which have implemented 3 management systems, as well as in case of those ones, which have implemented only a quality management system, the most important stakeholders are customers, employees and suppliers.

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

Table 1. The most important stakeholders in organizations with 3 certified management systems and a certified Quality Management System

Stakeholders	3 certificates		only ISO 9001	
	%	WRO	%	WRO
Customers	96.1	0.89	95.00	0.88
Employees	90.6	0.64	89.4	0.60
Suppliers	88.3	0.83	87.8	0.84
Media	84.4	0.55	60.6	0.48
Local communities	82.8	0.53	58.9	0.62
Competitors	80.0	0.76	79.4	0.70
Financial Institutions	76.1	0.77	75.6	0.69
Business Centers (local, regional, etc.)	75.0	0.83	74.4	0.72
Shareholders	71.1	0.69	83.3	0.68
State authorities	70.0	0.57	69.4	0.58
Universities, research institutes	68.3	0.60	67.8	0.49
Supervisory boards	65.0	0.63	64.4	0.6
Other business entities (internal exchange of information within a company)	64.4	0.75	63.9	0.70
Business support institutions	63.3	0.83	63.3	0.79
Trade unions	61.7	0.51	61.1	0.36
Business associations	60.0	0.70	59.4	0.68
Innovation clusters	60.0	0.68	58.9	0.65
Groups of special interests (lobby)	58.3	0.61	57.8	0.57

Source: Compiled by author.

Media had the fourth position among the organizations, which implemented 3 management systems, whereas, they were not so important for the organizations, which implemented only one management system. It is mainly due to the fact that the organizations implementing integrated systems are generally larger and more mature. These organizations were focused on shaping positive opinion amongst local communities. Universities and research institutes were positioned quite law. It is quite important since Poland is at behind the 20th position in terms of the innovation potential amongst EU countries (EC, 2016).

When the parameters of the project, opportunities and risks as well as internal parameters are already known, the targets and indicators are determined. The next stage consists in measuring the degree of realization of targets as well as in determining the criteria for the evaluation of the effectiveness in the light of the set objectives. It is through the discussion among the experts involved in carrying out studies within the project that the relations among indicated sub-targets, which should be defined in organizations, were distinguished, put in order and determined. The efficiency indicators, selected on the basis of the analysis of literature, specialized websites and specialized online forums, were assigned to the determined model targets and they were presented in the section below.

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

It was in the research process that the following model sub-targets were indicated:

- C_{01} - survival and development of the organization,
- C_{02} - mutually beneficial relations with investors,
- C_{03} - sustainable market value,
- C_{04} - sustainable intangible assets,
- C_{05} - sustainable intrinsic value,
- C_{06} - high economic efficiency,
- C_{07} - high social efficiency,
- C_{08} - high environmental efficiency,
- C_{09} - high organizational performance (effectiveness)
- C_{10} - mutually beneficial relations with customers,
- C_{11} - mutually beneficial relations with employees,
- C_{12} - mutually beneficial relations with the management board,
- C_{13} - mutually beneficial relations with suppliers,
- C_{14} - mutually beneficial relations with legislators,
- C_{15} - mutually beneficial relations with the society,
- C_{16} - minimization of the impact on the environment,
- C_{17} - fulfilled requirements of optional standards and codes,
- C_{18} - mutually beneficial relations with other stakeholders,

The achievement of the target C_{01} - "survival and development of the organization" is affected by the degree of the accomplishment of the target C_{02} - "mutually beneficial relations with investors". The achievement of the target C_{02} - "mutually beneficial relations with investors" is affected by the value of the organization expressed by its market value determined by the target C_{03} - "sustainable market value", which is a combined result of the targets C_{04} - "sustainable intangible assets" and C_{05} - "sustainable intrinsic value". The achievement of the targets in the total value sphere, i.e. C_{03}, C_{04}, $C_{05}$is affected by the accomplished targets in the sustainability sphere, i.e. : C_{06} - high economic efficiency, C_{07} - high social efficiency, C_{08}- high environmental efficiency.

The creation of the sustainable organization is affected by accomplishing the targets in the areas of: C_{10} - mutually beneficial relationships with customers, C_{11} - mutually beneficial relationships with employees, C_{12} - mutually beneficial relationships with the management board, C_{13} - mutually beneficial relationships with suppliers, C_{14} - mutually beneficial relationships with legislators, C_{15} - mutually beneficial relations with the society, C_{16} - minimization of the impact on the environment, C_{17} - fulfilled requirements of optional standards and codes, C_{18} - mutually beneficial relationships with other stakeholders.

C_{09} - "high organizational effectiveness" is a kind of a supporting target but it is very important in the hierarchy of the targets related to the maintenance of the effective business organization. Therefore, it determines the accomplishment of all sub-targets and contributes to obtaining of the products of the processes: R_1 - identified needs and requirements; R_2 - mission, vision, strategy, targets of the organization, indicators; R_3 - main processes, supporting processes, corporate governance; R_4 - secured adequate resources and information management principles; R_5 -products of accomplishing the processes or objectives, R_6 - data from the analysis of implementation results as well as products of the accomplishment of the supporting processes: R_7 - knowledge resources;-R_8 - leadership model; R_9 - integrated management system.

On the basis of a discussion in the panel of experts, representatives of the scientific community and practitioners, the indicators were selected, which should be monitored in the effective business organizations. It is below that a set of indicators was presented, which is assigned to the targets in the S-HPD&I model and at the same time both

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

the assignment of the indicators to individual groups and its selection are a result of a research process and can be characterized by certain subjectivity.

The indicators to measure organization's performance were presented in alphabetical order according to their Polish names so as not to suggest their importance in the catalog of the S-HPD&I model. **Error! Reference source not found.** it shows the general groups of the indicators examined according to their objective they support.

Table 1. Characteristics of the indicators examined

		Goals	Number of indicators	The average number of indications in the group	Average WRO	Number of measured indicators	Number of indicators / Number of separate indicators
			No.	%	(0–1)	no.	%
performance measurement	C_{03}	Sustainable market value	2	75,4	**0,94**	1	50,0
	C_{04}	Sustainable intangible assets	**9**	29,5	0,52	5	55,6
	C_{05}	Sustainable intrinsic value	7	32,5	0,62	6	85,7
	C_{09}	High organizational performance (effectiveness)	4	59,6	**0,87**	4	**100,0**
The objectives of stakeholders	C_{02}	Mutually beneficial relations with investors	**95**	33,9	0,58	67	70,5
	C_{10}	Mutually beneficial relations with customers	90	40,1	0,68	**70**	77,8
	C_{11}	Mutually beneficial relations with employees	90	25,2	0,43	47	52,2
	C_{13}	Mutually beneficial relations with suppliers	66	20,9	0,40	32	48,5
	C_{14}	Mutually beneficial relations with legislators	36	24,2	0,45	20	55,6
	C_{15}	Mutually beneficial relations with the society	30	13,0	0,26	9	30,0
	C_{16}	Minimization of the impact on the environment	33	**49,8**	0,76	28	84,8

Source: *Compiled by author*

The most important objectives and indicators that support that are Sustainable market value and High organizational performance (effectiveness) – that objectives refer to economic perspective of organization's operation. The second was Minimization of the impact on the environment – that objectives refer to ecological perspective of organization's. The third Mutually beneficial relations with the society was not mentioned as so important.

ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2020 Volume 7 Number 3 (March)
http://doi.org/10.9770/jesi.2020.7.3(25)

Conclusions

The management literature and practice is seeking the way to comply with growing number of standards and regulations, that's why the new frameworks and tools are published. The author goes along that trend and proposes The Sustainable System Management performance improvement model

During the research dome either on management bodies of organizations or management experts that were confirmed that the examined organizations are seeking the frameworks to comply with requirements in the different areas including legal, social, economic or ecological environment that would allow to manage and measure the performance of the organization as system. The participants had declared that they would test the proposed framework.

The organizations that want to achieve a high level of efficiency should focus on three performance aspects: financial, social and environmental ones. The measurement of the performance in these three aspects in the long-term contributes to a success of organizations.

The identification of the key measurement criteria for the efficiency of management system and their taking into account at the design stage of the system are a tool to improve the organization in the sustainability context.

References

Bititci, U. S., Carrie, A. S., & McDevitt, L. (1997). Integrated performance measurement systems: a development guide. International journal of operations & production management, 17(5), 522-534, https://doi.org/10.1108/01443579710167230.

Bititci, U. S., Turner, U., & Begemann, C. (2000). Dynamics of performance measurement systems. International Journal of Operations & Production Managemen, 20(6), 692-704, https://doi.org/10.1108/01443570010321676

Sardi, A., Garengo, P., Bititci, U. (2019), Measurement and management of competences by enterprise social networking, International Journal of Productivity and Performance Management, 68(1), 109-126 https://doi.org/10.1108/IJPPM-04-2018-0139

Dutta, S., Lanvin, B., & Wunsch-Vincent, S. (2018). The Global Innovation Index, European Commission and the University in Maastricht, 2018.

Gates, S. (1999). Aligning strategic performance measures and results. New York: Conference Board.

Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. Accounting, organizations and society, 28(7-8), 715-741, https://doi.org/10.1016/S0361-3682(03)00033-3.

Johnson, H. T., & Broms, A. (2000). Profit beyond measure: Extraordinary results through attention to work and people. Simon and Schuster.

Kaplan, R. S., & Norton, D. P. (1996). Using the Balanced Scorecard as a Strategic Management System. Harvard Business Review 74(1) (January–February 1996): 75–85.

Lebas, M., & Euske, K. (2002). A conceptual and operational delineation of performance. Business performance measurement: Theory and practice, 65-79.

Neely, A. D., Adams, C., & Kennerley, M. (2002). The performance prism: The scorecard for measuring and managing business success. London: Prentice Hall Financial Times.

Neely, A., Gregory, M., & Platts, K. (1995). Performance measurement system design: a literature review and research agenda. International journal of operations & production management, 15(4), 80-116, http://dx.doi.org/10.1108/01443579510083622

Nelson, M. R. (2003). Business Performance Measurement: Theory and Practice. Cambridge University Press.

Otley, D. (1999). Performance management: a framework for management control systems research. Management Accounting Research, 10(4), 363-382 https://doi.org/10.1006/mare.1999.0115

Rose, K. H. (1995). A performance measurement model. Quality progress, 28(2), 63.

Rummler, G. A., & Brache, A. P. (1995). Improving performance. San Francisco: Jossey-Bass.

Senkus, P. (2017). 11 The forthcoming ICT revolution in tourism in metropolitan areas. Metropolitan Commuter Belt Tourism, 126.

Senkus, P., Skrzypek, A., Łuczak, M., & Malinowski, A. (2014). Internet of Things: przeszłość-teraźniejszość-przyszłość, Zeszyty Naukowe Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach Nr 103 Seria: Administracja i Zarządzanie.

Sharma, M. K., Bhagwat, R., & Dangayach, G. S. (2005). Practice of performance measurement: experience from Indian SMEs. International Journal of Globalisation and Small Business, 1(2), 183-213.

Månsson, S., Reviewing the Role of Sustainability Professionals in Construction, Emerald Reach Proceedings Series, 2, 393–399 Emerald Publishing Limited 2516-2853 http://dx.doi.org/10.1108/S2516-285320190000002021

Merlina, M., Robèrt, K., Broman, G., (2017). A strategic approach to social sustainability – Part 1: exploring the social system, Journal of Cleaner Production, Volume 140, Part 1, 1, 32-41, https://doi.org/10.1016/j.jclepro.2016.03.170

Aknowledgements

The research was supported by Academy Of War Art, Poland

Aneta WYSOKIŃSKA-SENKUS
ORCHID ID: 0000-0001-9021-6355