Sustainable development of enterprises as a priority for socio-economic transformations in the region

Lyudmila Medvedeva [1*], *Nataliya* Zemlyakova [1], and *Anastasia* Averina[1]

[1] Don State Technical University, Gagarin sq.1, 344002, Russia

Abstract. The research purpose is to develop a methodological tool for assessing the achievement of sustainable development goals of an enterprise, taking into account industry factors. An energy complex enterprise of the Rostov region is selected as the research object, and the technique is tested using this example. The methodological framework considered in this study includes a set of information and analytical stages from building a database to the development of advanced strategic maps of sustainable development of an enterprise. In general, existing methods for measuring progress towards achieving the sustainable development goals by enterprises are based on the integrated approach to identifying planned and developing forward-looking indicators. The modern economic conditions, characterized by multiple negative surges, require building a policy of regional socio-economic development from the perspective of achieving the goals of sustainable activity of enterprises. Medium and large companies, regardless of their industry specifics, should be engaged in pursuing the sustainable development agenda to improve their performance efficiency in the long term. However, the relevance of these methodological tools continues to diminish each year due to structural changes in the financial and economic activities of companies. Thus, issues related to the development of methodological tools for measuring the achievement of sustainable development goals by enterprises, considering the industry importance for the region, are gaining theoretical and practical relevance.

1 Introduction

Sustainable development is an important strategic task of the state in the Russian Federation. Several sustainable development programs and projects are being implemented. They are aimed at improving economic and social conditions, the quality of life of the population, reducing environmental pollution and achieving rational use of natural resources.

The analysis of the sustainable development of an enterprise is the most important stage, taking into account modern conditions and the management system of an economic

* Corresponding author: milla1988@mail.ru

entity. Currently, virtually no companies carry out a full analysis of indicators reflecting the results of achieving sustainable development goals [1].

In our view, further improvement of the mechanisms for sustainable development of enterprises may encounter the following challenges:

- Lack of information. The information on the concept of sustainable development may be ambiguous, unsystematic or unreliable, which can make it difficult to set priorities and draw up a development strategy.
- Discrepancy between goals and interests. The implementation of the mechanism of sustainable development may conflict with the interests of owners, investors or other stakeholders who might view it as too expensive or not beneficial for the company.
- Financial limitations. Introducing sustainable development activities may require significant financial investments. Some businesses may not have sufficient resources, especially if they are still growing or facing financial difficulties.
- Lack of adequate measures and indicators.
- The complexity of changing organizational processes. The implementation of the mechanism of sustainable development may require changes in organizational structure, strategic priorities, production processes and stakeholder interactions. Some companies may face resistance from employees and difficulties in adopting new working practices.
- Risk of greenwashing. Some businesses may create an image of sustainability without adopting sustainable practices. This may lead to accusations of greenwashing and negative public and consumer sentiment, which in turn will undermine the company's business image.

The identified weaknesses determine the need to develop methods for assessing the sustainable development of enterprises.

2 Materials and methods

This study applies classic tools for collecting and processing information, methods of data grouping and visualization. The developed technique is conceptually integrated into the system for improving the indicators of sustainable development of the region and the state in general.

The process of developing the technique includes the following steps:

- Analysis of the company's external and internal environment. It is necessary to identify the economic, social and environmental factors which may impact a company's sustainable development.
- Setting the sustainable development strategy. Based on the environment analysis, the strategy should be developed aimed at achieving a company's sustainable development goals. The strategy should include both long-term and short-term goals and activities.
- Engaging stakeholders. Sustainable development of an organization requires balancing the interests of all stakeholders, including shareholders, employees, customers, suppliers and the public. It is important to engage them in the process of developing a sustainable development mechanism to consider their opinions and needs.
- Determining goals and indicators of sustainable development. It is essential to establish specific goals and indicators to measure progress toward sustainable development. These indicators may include areas such as financial stability, energy efficiency, social responsibility, environmental protection and others [2].
- Development and use of appropriate tools and methods. Tools and methods should be developed and used to achieve the established sustainable development goals. They may include energy saving programs, waste management, social programs and others.

- Monitoring and evaluation. After the sustainable development mechanism is implemented, it is essential to monitor and assess its effectiveness. This will help identify weaknesses and make adjustments to the mechanism [3].

3 Results

Let us start developing the methodological tool by categorizing the problems that negatively impact the development and testing of the concept of a company's sustainable development (Figure 1).

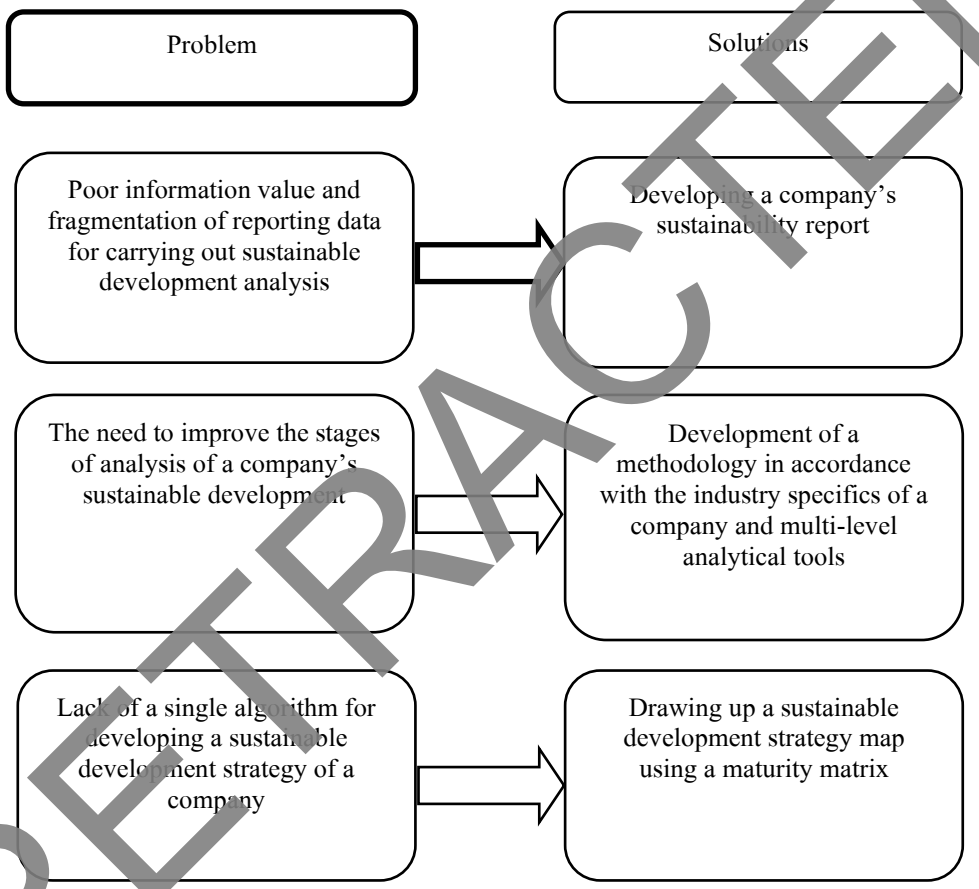

Fig. 1. – Problems of developing the concept of sustainable development.

In our view, the database is a set of data that is systematized by levels and used for collecting and processing information during analysis.

Figure 2 illustrates the database for conducting sustainable development analysis at all levels of management.

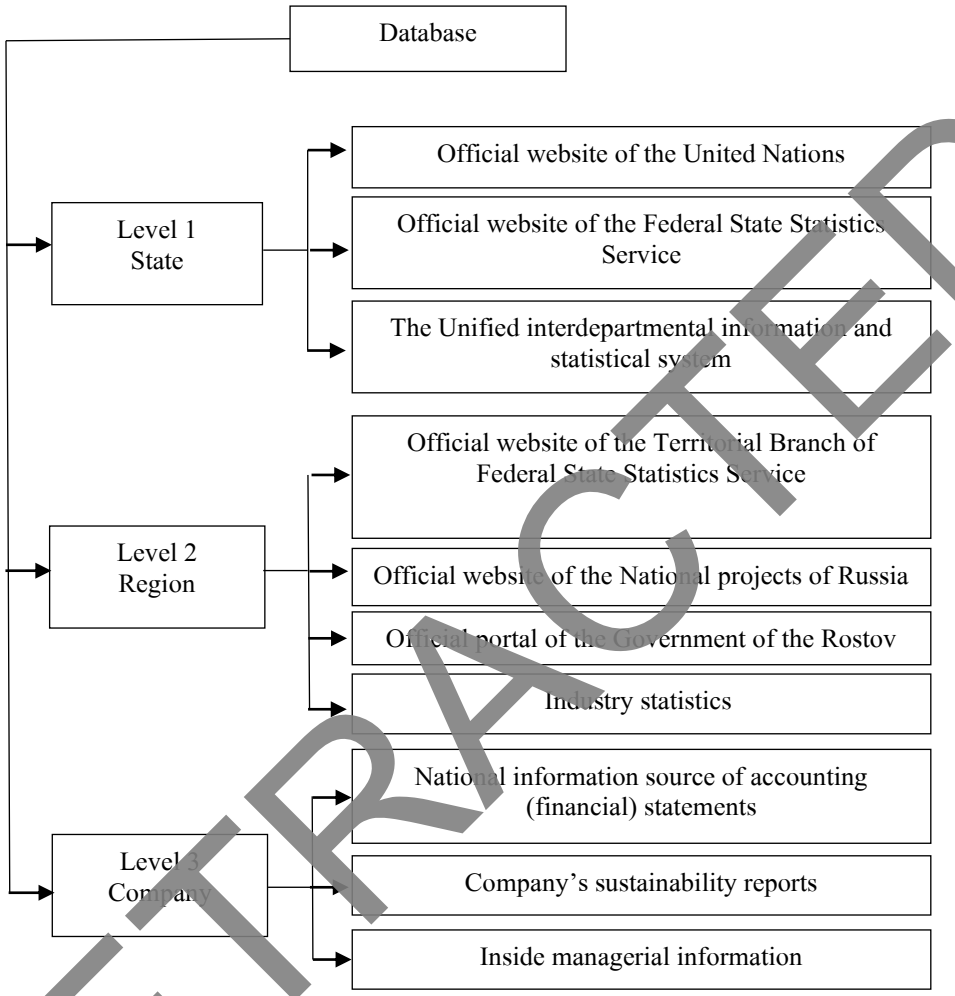

Fig. 2. – Database used in the process of assessing the achievement of sustainable development goals.

These sources are operational in nature and can be used to analyze the financial and economic activity of an enterprise and its specifics. However, not all companies produce sustainability reports, which complicates the analysis of a company's sustainable development [4].

After building a high-quality database, which should also fit into the analysis technique, the methodological aspects developed by the authors are considered (Figure 3).

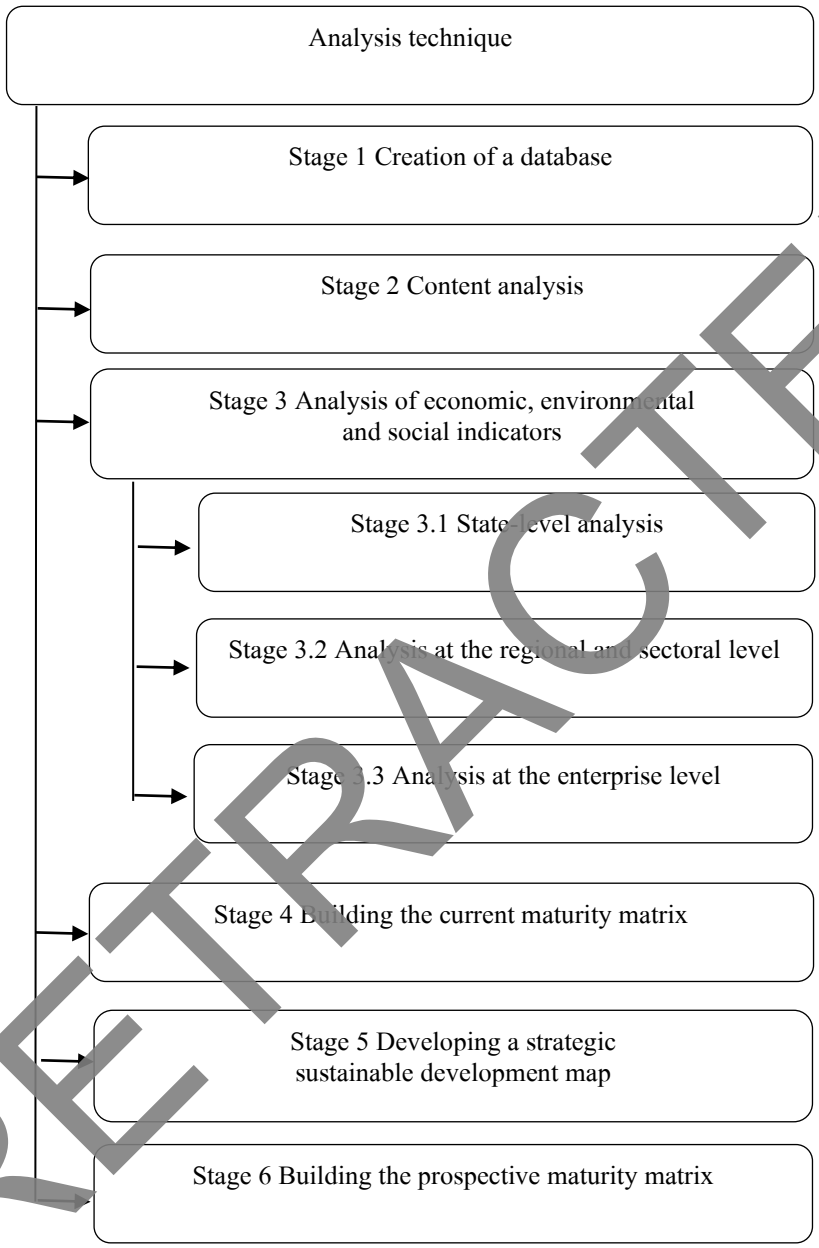

Fig. 3. – The proposed technique for measuring progress towards achieving the sustainable development goals of a company.

We have developed the following stages of the assessment technique, including:
- Content analysis.

- Analysis of economic, environmental and social indicators reflecting progress in achieving the sustainable development goals at the level of state, region (considering the industry specifics of a company's activities) and enterprise.
- Building current and prospective maturity matrices in terms of sustainable development.
- Development of the strategic map.

Let us consider in Table 1 an example of content analysis of non-financial reporting data indicating the achievement of sustainability targets. Content analysis should be conducted considering the company's industry specifics compared with at least two or three enterprises. As a case study, we selected companies operating in the energy sector.

Table 1. – Content analysis of non-financial reporting of companies in the energy sector.

Reporting indicators	Donenergo JSC		Rosseti Yug PJSC		TNS Energo PJSC Rostov-on-Don	
	Points*	Note	Points*	Note	Points*	Note
Environmental indicators						
Resource consumption	1	Information on the use of energy resources is provided	1	Data is provided	1	Records are maintained
Environmental impact	1	There is an overview of environmental risks, but no calculations	1	The company has an environmental policy	1	Environmental protection activities are listed, but no calculations are provided
Expenses for ensuring environmental security	1	Data on electricity losses is provided, as well as activities that take place to reduce losses and their effectiveness	2	Environmental protection expenditures and investments are provided	0	The data is not reflected in the report
Biodiversity conservation	0	The report does not contain this data	1	The activities undertaken to preserve biodiversity are described	0	The report does not contain this data
Social indicators						
Staffing	2	The average number of employees is provided, along with the staffing structure categorized by activity type, age and education. Labor costs are provided.	2	The average number of employees for three years, staff distribution by branches, and staffing structure by age, category and education, are provided. Staff management indicators are calculated.	2	The staff dynamics, the distribution of employees by category and age and the qualitative composition of employees are reflected.

Interaction with the public, region and state	0	There is no data	0	There is no data	1	Information on interaction with shareholders and investors is provided
Occupational safety	0	Occupational safety data is not disclosed	2	The occupational safety activities undertaken are given, along with the indicators on fire safety, occupational diseases and works entailing a heightened risk to health	1	The commission and the activities undertaken are described. "Zero Injuries" program is introduced
Anti-corruption	0	There is no data	1	The company has an anti-corruption policy. The activities are described, along with the data on the number of employees subject to declaration	1	The company has an anti-corruption policy, but no indicators are evaluated
Economic indicators	2	The dynamics of the main indicators is shown along with production performance	2	The analysis of deviations in key indicators of financial and economic activity is conducted	2	The indicators of financial and economic activity of the company are presented
Risk management system	1	The main risks and ways to mitigate and address them are described	1	The risks, their significance rate and risk management activities are described. ESG risks are described	1	The assessment of the risk management system's efficiency is described, but no indicators are provided
Total score	**8**		**13**		**10**	

*0 points – the indicator is not reflected in the company's reporting,
1 point – the indicator is quantified,
2 points – monitoring data on the indicator's change over several years is presented,
3 points – the data collection procedure is shown, the indicator calculation method is revealed in accordance with the GRI, SASB standards and the Methodological recommendations of the Ministry of Economic Development,
4 points – medium- to long-term forecast values of the indicator are determined.

The content analysis of non-financial reporting of the companies under study shows that Donenergo JSC, despite being a key industry player, ranks last in terms of data disclosure (8 points).

The next step of the proposed technique involves conducting a level analysis of economic, social and environmental indicators.

At the state level, it is suggested to estimate economic (gross domestic product, the index that measures the progress in achieving the sustainable development goals and the

human development index), environmental (the level of greenhouse gas emissions and consumption of natural resources) and social indicators (the levels of poverty and inequality, education level, etc.).

In our opinion, at the regional level, the industry specifics of the company should also be considered in the assessment process. Thus, we propose to carry out the analysis according to the following group of indicators: economic (gross regional product, index of industrial production, turnover), environmental (consumption of natural resources, climate risks, pollution), social (unemployment rate, level of housing provision, etc.) and sector-specific indicators (energy consumption, electricity production, etc.).

At the enterprise level, the assessment should involve the following indicators: economic (financial stability and operating profitability, investments, job creation), environmental (energy efficiency, emissions, environmental certification) and social (employee satisfaction, social responsibility) [5, 6].

The next stage of analysis implies building the current maturity matrix in terms of achieving sustainable development goals (Table 2).

Table 2 - Current maturity matrix of sustainable development of Donenergo JSC

Principle	Company's policy	Stages of achieving sustainable development		
		1. "Red"	2. "Yellow"	3. "Green"
Adherence to ethical standards	Maintaining the highest standards of staff and professional ethics, fairness, honesty and trust	There are unspoken rules of conduct; the staff rules are regulated by the Labor Code of Russia and are specified only in the employment contract.	While a corporate code is developed, not all employees are familiar with it. The code is not publicly available. There are standards of professional ethics, including a system of complaints and suggestions. A wide range of stakeholders trust the company.	A corporate code is adopted, all employees are familiar with it and are guided by it in their activities. The code is available in open sources. The company inspires confidence and enjoys a strong reputation among stakeholders.
	Compliance of activities with the company's principles	The principles are developed but not implemented.	The principles are developed and reflected in the internal documents of the company. Not all employees are guided by them.	The company's principles are implemented at all levels of the organization, in particular, in terms of sustainable development. The team has an understanding and personal interest in the company's sustainable development.
Engagement	Staff involvement in energy saving processes	Only managers are engaged in energy saving processes. Hierarchical management style rather than based on trust.	Some employees are involved in the process, but there is low incentive for training and delegation of authority from management.	All employees are informed about energy conservation. The company adopted "Corporate Patriotism", i.e. there is an awareness of the importance of the energy saving problem. Employees are highly educated.

	Interaction with the public	Statutory activities are being carried out without taking into account the wishes of society.	Regulatory documentation is developed, but not disclosed.	Regulatory documentation is developed and adopted. Consumer suggestions and complaints are analyzed and considered. the company's operating boundaries are expanded, favorable external environment is ensured.
Responsible leadership	Capacity building for sustainable development	Only legal requirements are met. Employees are not aware of sustainable development.	There are requirements for staff competence, a system of training incentives and authority delegation aimed at the company's sustainable development.	There is unity within the company regarding sustainable development goals. Employees are encouraged to make constructive suggestions for the company's sustainable development.
	A systematic approach to energy consumption analysis	The analysis is carried out on an occasional basis. Minimal analysis.	Minimal analysis is conducted, and data is not disclosed.	Periodic analysis is conducted. Activities are being carried out to improve the situation. The information is reflected in the sustainability report.
	Using innovative technologies and equipment to monitor and manage energy consumption	The appearance of using innovative equipment is created.	Innovative equipment is introduced, but is not used everywhere.	Innovative equipment developed by the company is used in all activities, such as photographic recording of metering devices, power transformer monitoring devices and others.
Openness and transparency	Sharing information and creating an atmosphere of trust	Minimal analysis. Only generally accepted reporting is published.	There are internal and external stakeholders who regularly receive reports.	Extensive sustainability reporting, outlining risks, activities, stakeholder engagement, etc.
Conservation and recuperation of the environment	Analysis of environmental factors	Standards are not implemented. Key challenges such as risks and opportunities are not identified. Employees are not	The company maintains environmental policy and standards. Environmental goals are shared.	Focus on achieving concrete results. The goals are analyzed and adjusted. The environmental management system is certified by the

		engaged in sustainability activities.	The company has an environmental management system with designated responsible persons.	appropriate authority. The performance indicators are calculated.
Well-being	Staff integration during non-working hours	Holding meetings	Events are organized, data is not published	Trips are organized, employees participate in meetings, rewards are given to the children of employees who have completed the academic year with good and very good marks, the team participates in providing humanitarian aid, tree planting festivals, organization of art exhibitions, etc. with a report on the official website

Based on this matrix, a strategic map for sustainable development can be drawn up.

The map should reflect the company's promising areas of activity concerning the achievement of sustainability goals, which should be actively supported at all levels of management.

4 Conclusions

The use of the proposed technique will help businesses to make more effective management decisions in the area of achieving sustainable development goals, and correspondingly, to be included in the state's strategic agenda. It is the companies that prioritize sustainable development that currently enjoy increased competitive advantages.

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