PROJECT MANAGEMENT SUSTAINABILITY ASSESSMENT AT ENTERPRISES OF THE RUSSIAN REGIONS

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ABSTRACT:
The transition to sustainable project management is becoming a significant global trend in the development of organizations. Russian companies are also beginning to introduce sustainable project management into their practice. However, in most cases this happens at a slow pace, not systematically and with a weak motivation. At the same time, Russia has a positive experience in building a system of sustainable project management of enterprises, which is important to study, draw conclusions from it and develop a consistent policy of transferring project management on the principles of sustainability. This article proposes to discuss the results of our study, the purpose of which was to assess the sustainability of project management in enterprises. To conduct the study, a system of indicators and methods of their diagnosis was developed. The system consists of four groups of indicators: economic, environmental, social and institutional. The methodology is presented by a standardized survey of experts. The study was conducted at 34 enterprises in 10 cities of Russia. Project managers, program and portfolio managers, project management specialists acted as experts. The results of the study are presented in the form of analysis of economic, social, environmental and institutional components of project management sustainability. We also evaluated the integral indicator of the maturity level of project management. It was concluded that the sample population is represented by enterprises with high, medium and low maturity of project management. This allowed us to establish particular indicators of sustainability depending on the maturity level of project management. Also, the motives of enterprises' appeal to the policy of sustainability are revealed. The general conclusion confirms our hypotheses that among the leading enterprises there are those which implement the strategy of sustainability consciously and those which do it without a strong positive motivation. Enterprises have also confirmed the hypothesis of the importance of state support for sustainable project management practices. The novelty of our research lies in the original methodology, which involves the evaluation of a whole complex of different indicators, as well as the establishment of an integral indicator of the maturity level of project management. The proposed analysis allows us to identify trends in the development of sustainable project management and ways to extend it to enterprises working in the format of projects.
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KEYWORDS:
project activity, sustainable project, sustainable management, economic, social and environmental indicators.

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1. Introduction.

Organization of activities in the projects' form and professional project management are becoming common management practices. However, to support their effectiveness these practices should conform to world trends of the economy and of human development. This trend is the policy of sustainable development.

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The concept of sustainability affects the content of project management, its targets and success criteria.

Let us denote the problem to which our research is directed. In the world practice it is possible to find a lot of positive examples of transfer of project activity of the enterprises to the principles of stability, and also maintenance of this activity by means of sustainable project management. In Russia, only a small number of enterprises have implemented sustainable project management. Moreover, this implementation was not a copy of foreign experience; it was a flexible adaptation of the principles of sustainability to Russian conditions. In the course of adaptation useful experience has been gained and valuable lessons have been learned. The problem is that most companies do not know this experience, do not realize the value of sustainable project management, and do not have advanced technologies for sustainable project management. One solution could be monitoring the best sustainability practices being demonstrated by Russian enterprises. Studies concerning the analysis of the state of sustainable project management practices have not been conducted in Russia yet.

2. The theoretical framework of the study

Sustainability is a key idea that underpins sustainable project management. Sustainability in the general scientific sense of the term can be seen as the ability of a system or process to maintain its existence for a long period [1]. In this sense, project management will be sustainable if it retains its positive features for a long time and gives a long-term useful result in the form of stable and productive projects.

In our study, the term “sustainability” has the meaning that it lays the concept of sustainable growth and development adopted in the world community. The most widely used definition of sustainable development was given in the report of the International Commission on environment and development (ICSD) “Our common future” (also known as the Brundtland report) in 1987. Sustainable development has been defined as “development that meets the needs of the present without compromising the ability of future generations to meet their needs” [2, p.43.]. Sustainable development can be defined as development that recognizes the rights of all people and nations to grow and prosper today and in the future [3].

Despite the simplicity of the idea, the concept of sustainable development is seen as one of the most complex concepts ever developed. Its main challenge is to ensure the development of social and economic systems in harmony with the ecological systems of the planet. The concept of sustainable development aims to ensure that everyone can lead a decent life and at the same time protect the planet from destruction [1, p. 2].

Sustainable management can be defined as "organizational practices that result in sustainable development" [3, p.4]. There are broad and narrow definitions of sustainable or green project management. In a narrow sense, sustainable management (or green management) is environmental project management with environmental objectives [4]. In this case, the concept of sustainable project management includes strategies that minimize the impact of projects on the environment and maximize the conservation of resources [3, p.3-4]. The ideal sustainability cycle means using everything that is produced and as a result has zero emissions, zero waste [4, p.21].

In a wide sense, sustainable project management aims to ensure the economic efficiency of an organization or project in the long term, while ensuring a high level of environmental and social responsibility. According to John Carboni, “by changing our view of project implementation only slightly, we can create a global system that conserves natural resources, positively influences society and strengthens the world economy” [5, p.7]. In this study, we will use the terms “sustainable management” and “green management” as synonyms and adhere to a broad definition of sustainable project management.

From the perspective of GPM Global, “sustainable project management includes management tools and techniques to achieve a certain balance between limited resources, social and environmental responsibility. Sustainable project management ensures the achievement of business goals while reducing the negative impact on the environment” [5, p.8]. According to GPM Global, sustainable management is applicable from the local to the global level and is based on the principles of transparency and responsibility [6, p.9].

Thus, the concept of sustainable project management seeks to harmonize economic, social and environmental interests both in the long term and in the short term [9]. In addition, institutional support for sustainability is need-

ed in the form of a sustainability strategy and institutions for its implementation.

3. Purpose, methodology and research methods.

Based on the problem, the aim of our study was to analyze the level of maturity of sustainable project management in Russian enterprises.

Research problem:

- to develop a methodology for assessing the level of maturity of sustainable project management;

- to study the state of sustainability of projects and their management with the help of the created methodology;

- to analyze the existing experience of implementing sustainable project management, identify positive trends and problem areas, outline ways of taking them into account or elimination.

Methodology and research methods

The basis of our study was a specialized standard for green project management GPM P5, developed by the international organization "Green Project Management Global" (GPM Global) [5]. In particular, from this standard we have borrowed the idea of identifying three groups of sustainability indicators – economic, social and environmental ones. We have refined and supplemented these indicators with another group – institutional indicators. The fourth institutional component was included by the UN Commission on sustainable development in the system of sustainability indicators. However, these indicators have not been worked out in depth. Our methodology is supposed to diagnose the degree of coordination of the enterprise strategy and practice of sustainable projects with the help of institutional indicators.

In addition, we have developed an integral indicator to assess the maturity level of sustainable project management. The method is created on the basis of scientific researches of various authors [3, 4, 6, 7, 8, 10]. In contrast to the developments presented in scientific publications, we have proposed a method of point estimates of the selected indicators of sustainability. The method and the corresponding methodology presuppose a standardized survey of experts. Project managers, program and portfolio managers, project management specialists acted as experts. The criteria for the selection of experts were: experience in participating in projects for at least 1 year, experience in participating in programs and activities for sustainable development of the enterprise, good knowledge of the situation at the enterprise, in particular in matters of ecology, social responsibility and economy.

The study was conducted at 34 enterprises in 10 cities of Russia. The main criterion for the selection of enterprises was the presence of the enterprise project activities and the experience of at least partial use of the principles of sustainability. That is, the sample includes enterprises with developed or developing practice of green project management. The experience of leaders in this direction is presented. Therefore, the results cannot be extended to many Russian enterprises, in particular, those that do not yet have the practice of sustainable development.

The sample set includes enterprises with high, medium and low maturity level of sustainable project management. This allowed us to establish specific indicators of sustainability depending on the level of maturity of project management to show the relationship between the manifestation of sustainability and the degree of development of project management in the enterprise. There is a brief description of the sample population:

- the enterprises of different branch accessory are investigated: production and processing of oil, chemical production, mechanical engineering, machine construction, aircraft construction, trade, financial services, IT-branch, and consulting;

- the size of sample enterprises: 53 % of large enterprises, 19 % of medium-sized enterprises and 28 % of small enterprises;

- on the regional basis, the study was attended by enterprises of cities: Moscow, Omsk, Ekaterinburg, Arkhangelsk, Kazan, Krasnoyarsk, Chelyabinsk.

4. The novelty of the research methods and results

The novelty of our research lies in the original methodology which involves the evaluation of a whole complex of different indicators as well as the establishment of an integral indicator of the maturity level of project management. The obtained analytical materials on the state of sustainable project management in Russia, on the motivational readiness of enterprises to use the policy of sustainability in project activities also have novelty. This kind of information before our study was not found in scientific publications. This information is use-

ful for decision-making on further development and dissemination of experience of sustainable project management in enterprises.

5. Research result

5.1. The overall level of maturity of sustainable project management in enterprises.

First of all, the data were obtained on the integral indicator of the level of maturity of sustainable project management in enterprises. In particular, from the whole set of enterprises where the monitoring was carried out:

- 12.5 % of enterprises have a high level of maturity;
- 18.8 % of enterprises have a maturity level above average;
- an average maturity level have 37.5 % of enterprises;
- 15.6 % of enterprises have a below-average level;
- 15.6 % of enterprises have a low level.

That is, the sample includes enterprises with different levels of maturity of sustainable project management. The third part of the enterprises has reached a high level of maturity, another third part of the enterprises has low and below the average levels of maturity, the remaining enterprises have shown an average level of maturity. The choice of enterprises with different maturity levels of sustainable project management was conscious. Our task was to study the experience of various enterprises wich combine the installation of the principles of sustainable development in their activities. Further, to simplify the analysis, we will divide enterprises into groups: enterprises with a high, medium and low level of maturity of sustainable project management.

5.2. Analysis of institutional indicators of project management sustainability

Let us turn to the analysis of the group of institutional sustainability indicators. A fairly high level of the presence of the sustainable development strategy at the enterprise was registered. Thus, 76.5 % of enterprises have a strategy of balanced and long-term sustainable development. Other companies do not reflect sustainability criteria in their strategy. However, this strategy for most enterprises (56 %) is focused on a short period of time – up to three years. One third of enterprises (32 %) have a strategy for the period from 4 to 6 years, the remaining 12 % build their strategy for the period over 10 years.

To clarify the enterprises' understanding of the essence of sustainability criteria, the question was asked: "Does your company's strategy include economic, social and environmental principles (goals)?". The answers are provided in table 1. As can be seen from the table, to a greater extent the enterprises reflect in their strategy the economic and social principles of development, to a much lesser extent – environmental. The coverage of all three principles or goals is higher in enterprises with a high level of maturity of sustainable project management.

Let us turn to the question of what are the institutional indicators of sustainability of projects implemented by enterprises.

The enterprises included in the sample set implement the following projects:

- regional level (62 % of enterprises), national level (16 %), international level (22 %);
- commercial level (97 %), social and entrepreneurial (32 %), social non-commercial (13 %), non-commercial internal (2 %).

Let us consider how two main features of sustainability are implemented in the projects: balance of economic, social and environmental criteria; focus on long-term effect. Answers to the question "Do you set any economic, social and environmental objectives in projects at the same time?" show that 62 % of enterprises do it, 38 % of enterprises do not seek to balance the three tasks in their projects. At the same time, 45 % of enterprises when planning projects focus on the period of completion of projects, 24 % focus on 2- 4 years after the end of the project, the remaining 31 % plan to obtain effects of their projects for a period of more than five years. That is, many projects of enterprises have signs of sustainability.

Table 1

The use of economic, social, environmental principles (goals) by enterprises in the strategy in the context of the current level of maturity of sustainable project management, %

Strategy includes principles (objectives):	All enterprises	Enterprises with a high level of maturity	Enterprises with a medium level of maturity	Enterprises with a low level of maturity
economic	100.0	100.0	100.0	100.0
social	64.7	91.6	72.7	27.2
environmental	32.3	58.3	27.2	9.0

Summing up the interim results, it should be noted that enterprises implement the policy of sustainability in their project activities and support it with their strategic goals. Although, this happens sometimes without the use of special sustainability terminology. For example, the question "Does your company apply the concept of sustainable project management as management, which achieves the balance of economic, social and environmental principles and objectives?" only 47 % of enterprises gave an affirmative answer. Other companies do not use the sustainability terms. But at the same time they implement the strategy of sustainable development (76.5 % of the enterprises confirmed that their strategy is based on the balance of economic, social and environmental guidelines).

5.3. Analysis of social indicators of project management sustainability

The study identified the most frequently mentioned indicators of social sustainability of projects in different sources. They are presented in table 2.

The monitoring demonstrated the average level of social sustainability of the projects. There is a fairly common practice of gender discrimination, insufficient conditions for the development of human resources and significant wage gaps in project teams.

The analysis of social indicators of sustainability in the context of the maturity level of sustainable project management suggests that enterprises with a higher level have a much more favorable situation with the social sustainability of projects. These projects support the policy of gender equality, training and human resource development, as well as the policy of social justice in the field of compensation for project work.

Further analysis showed that social sustainability indicators are used in project management. Thus, the following indicators are used in the formulation of tasks and for the evaluation of the project:

- decent work practices (occupational safety, training and equal opportunities) – 70.5 %;
- ensuring the health and safety of the consumer, non-interference in the privacy of the consumer – 64.7 %;
- ethical behavior (prevention of bribes and corruption) – 55.8 %;
- respect for human rights (labor law, non-discrimination) – 38.2 %;
- poverty reduction (decent wages) – 35.2 %.

Table 2

Indicators of social sustainability of projects in the context of the current level of maturity of sustainable project management

Indicators	All enterprises (in %)	Enterprises with a high level of maturity (in %)	Enterprises with a medium level of maturity (in %)	Enterprises with a low level of maturity (in %)
Training of project team members:				
-regular	27.1	33.3	27.2	18.1
-occasionally	38.0	58.3	27.2	27.2
-absents	34.9	8.4	45.5	54.5
The ratio of men and women among project managers:				
- men about 90 %, women about 10 %	18.0	0	18.0	36.5
- men about 70 %, women about 30 %	44.8	33.3	54.5	45.5
- about equal number	32.2	58.3	27.5	9.0
- men about 30 %, women about 70 %	3.0	8.4	0	0
- men about 10 %, women about 90 %	2.0	0	0	9.0
How many times wages of 10 % highest paid employees higher wages of 10 % most low paid employees in projects:				
- 2 or less times higher	15.0	41.8	0	0
- 3 times higher	8.3	25.0	0	0
- 4 times higher	16.7	16.6	18.0	18.0
- 5 times higher	15.0	16.6	18.0	10.0
- 10 times higher.	24.0	0	45.6	36.0
- difficult to answer	19.0	0	17.4	36.0

5.4. Analysis of environmental sustainability indicators of project management

Table 3 shows indicators of environmental sustainability. As you can see, the indicators are low. The worst situation is with the use of renewable energy. Few enterprises have the practice of internal sorting and recycling. The use of local products and the availability of an environmental impact assessment system for projects prior to their implementation are at a higher level. Naturally, the indicators are higher in enterprises which have shown a high level of maturity of sustainable project management.

Enterprises in project management use the following tasks and corresponding KPIs:

- materials and other resources use indicators – 55.8 %;
- transport use indicators – 41.1 %;
- energy use indicators – 35.3 %;
- water use indicators – 29.4 %;
- carbon footprint indicators – 20.5 %;
- other harmful emissions into the atmosphere indicators – 20.5 %.

In general, the studied enterprises have shown their leadership position in the development of sustainable project management. They use not only economic criteria, but also environmental and social ones. Although the balance of these criteria has not been achieved yet. This is evidenced by the answers to the question of what goals in projects are more often in priority:

- economic goals were noted by 91.2 % of enterprises;
- social goals were noted by 6.5 % of enterprises;
- all the three goals were noted by 2.3 % of enterprises.

A positive trend is that sustainability-oriented thinking is gradually emerging among project managers. The vast majority of them (79 %) agreed with the statement that the implementation of the principles of sustainable development leads to the success of the organization in Russia. According to respondents, the balance of economic, social, and environmental principles in project management has a positive impact on the following indicators:

- positive image of the organization;
- higher quality of project management processes;
- higher value of project results;
- increasing the success chances of project and its product;
- project risk reduction.

Enterprises believe that public policy measures can positively influence the more active use of sustainability policy. Among the significant measures, about 80 % of enterprises mentioned the use of tax incentives to stimulate direct investment of private capital in sustainable development, financing of sustainable infrastructure in the region and the country, financing of basic research, the use of legislation and enforcement measures to prevent unsustainable practices, the development and support of the generally accepted system of sustainability assessment and reporting.

Table 3

Indicators of environmental sustainability of projects in the context of the current level of maturity of sustainable project management

Indicators	All enterprises (in %)	Enterprises with a high level of maturity (in %)	Enterprises with a medium level of maturity (in %)	Enterprises with a low level of maturity (in %)
Availability of the environmental impact assessment system for projects prior to their implementation:				
- available,	41.0	66.6	45.4	9.0
- not available	59.0	33.4	54.6	91.0
Using products from local manufacturers (suppliers) to reduce transportation costs and the environmental impact:				
- use	57.0	75.0	63.6	36.4
- not use	43.0	25.0	36.4	63.6
Use of renewable energy (e.g. wind, solar, biofuels) to reduce the environmental impact:				
- use	12.0	25.0	9.0	0
- not use	88.0	75.0	91.0	100.0
Availability of sorting and processing of garbage (waste) within the organization:				
- available,	37.0	50.0	36.3	9.0
- not available	63.0	50.0	63.7	91.0

6. Conclusion

Thus, the study showed that enterprises from different regions of Russia are turning to the strategy of sustainable development and growth. At the strategic level, enterprises are aware of the importance of the economic, environmental and social dimensions of doing business. At the same time, economic guidelines are still a priority compared to social and environmental ones. Not all companies which have chosen a sustainable development strategy, implement it in their current projects. Enterprises are just beginning to turn to green projects and their management practices. We have although registered positive changes in this direction. The results of the study suggest that many enterprises in the Russian regions are at the beginning of the development of their practice of sustainable project management. The first steps are quite successful, but in the future it is necessary to strengthen and spread this practice. The prospects for the development of green project management in order to implement the strategy of sustainable development of the enterprise can be recognized the following: achieving a greater balance of economic, environmental and social targets; deepening the social and environmental policy of enterprises, the implementation of the principles of sustainability in the systems of evaluation, audit and motivation of activities within the projects of enterprises.

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ОЦЕНКА УСТОЙЧИВОСТИ УПРАВЛЕНИЯ ПРОЕКТАМИ НА ПРЕДПРИЯТИЯХ РЕГИОНОВ РОССИИ

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АННОТАЦИЯ:
Переход к устойчивому управлению проектами становится мировым трендом развития организаций. Российские компании также начинают внедрять его в практику, однако зачастую не системно и со слабой мотивацией. Вместе с тем в России имеется положительный опыт в построении системы устойчивого управления проектами предприятий, который важно изучать, делать из него выводы и вырабатывать последовательную политику перевода проектного ме-

неджмента на принципы устойчивости. В данной статье предлагаются для обсуждения результаты нашего исследования, целью которого стала оценка показателей устойчивости управления проектами на предприятиях. Для проведения исследования разработана система показателей и методика их диагностики. Система включает четыре группы показателей: экономические, экологические, социальные и институциональные. Методика представлена стандартизированным опросом экспертов. Исследование проведено на 34 предприятиях десяти городов России. В качестве экспертов выступили менеджеры проектов, руководители программ и портфелей проектов, специалисты по управлению проектами. Результаты исследования представлены в виде анализа экономической, социальной, экологической и институциональной составляющих устойчивости управления проектами. Также нами оценен интегральный показатель уровня зрелости проектного менеджмента. Были сделаны выводы о том, что выборочная совокупность представлена предприятиями с высоким, средним и низким уровнем зрелости управления проектами. Это позволило нам установить частные показатели устойчивости в зависимости от уровня зрелости проектного управления. Также выявлены мотивы обращения предприятий к политике устойчивости. Общий вывод подтверждает поставленные нами гипотезы о том, что среди предприятий-лидеров есть те, кто внедряет стратегию устойчивости осознанно, и те, кто пока это делает без наличия сильной позитивной мотивации. Предприятия также подтвердили гипотезу о важности государственной поддержки практики устойчивого управления проектами. Новизна нашего исследования заключается в оригинальной методике, предполагающей оценку целого комплекса различных показателей, а также установление интегрального показателя уровня зрелости проектного управления. Предлагаемый анализ позволяет выделить тенденции в развитии устойчивого управления проектами и наметить пути его распространения на предприятия, работающие в формате проектов.

КЛЮЧЕВЫЕ СЛОВА:
проектная деятельность; устойчивый проект; устойчивое управление; экономические, социальные и экологически показатели.

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