

## The task of the key stakeholders values harmonizing in a construction project in the context of strategic communications with them

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### ABSTRACT

The research objective is defined, it is to increase the effectiveness of interaction with stakeholders of construction projects. Scientific sources on stakeholder engagement and value-based project management are analyzed. Typical key stakeholders of a construction project are identified, their brief characteristics are provided. A conceptual model of balancing the values of key stakeholders of a construction project and the target function of harmonizing strategic communications with key stakeholders of a construction project are proposed. Prospects for further research in the chosen direction are outlined. Conclusions are formulated.

*Keywords: project management, construction project, key stakeholders, values, strategic communications.*

### 1. INTRODUCTION

The success of construction projects is strongly linked to stakeholders. Successful communication with stakeholders, building partnerships with them, and maximum consideration of their interests by the construction project management team are components of such success. The high uncertainty of the project environment, the war in Ukraine, which is caused by the aggression of the Russian Federation, the increasing pace and depth of changes in technologies and management systems - impose special requirements on construction project management systems. It should be recognized as urgent to develop new approaches to such systems, take into account the expectations of stakeholders, formalize and digitize communications with them, in the context of a long-term perspective, in order to establish long-term sustainable mutually beneficial relationships. In this sense, it would be appropriate to use and develop models and methods of value-oriented management in project management, and develop such models and methods to establish effective delivery of values to all key stakeholders, as well as balancing such values.

### 2. ANALYSIS OF LATEST RESEARCH

The classic project management standard PMBOK [1] distinguishes two domains in the context of the subject under study. One of the domains is the value delivery system, which provides models and methods for creating value for project stakeholders, as well as the corresponding information flow. The other domain concerns stakeholders. In this context, one of the 12 project management principles declared by PMBOK is formulated as "Effectively engage stakeholders". The "Stakeholders" domain itself describes the types of stakeholders, methods of their engagement, relevant metrics and communication models.

In the scientific sources, value-based management has been developed into a methodology within project management, in particular in the work of Harold Kerzner [2], and other works by researchers who propose to create a corporate governance system based on a value approach, offering appropriate models and methods for this [3]. It is also worth noting that this approach is also developing in its application to construction projects, in particular to the creation of an organizational structure [4].

However, the topic of value-based management of key stakeholders in construction projects has not been sufficiently

addressed in the scientific sources, in particular regarding the use of strategic communications for this purpose [5], which determines the relevance of this study.

### 3. MAIN PART

According to classical methods, based on the results of a qualitative analysis of the stakeholders of a construction project, a short list of those stakeholders who have the greatest impact on the project and are closest to the project can be obtained - let's call such stakeholders as "key". We identify a register of typical key stakeholders of a construction project, while determining the strength of their influence on the project (SH to Project) and the ability of the project to influence them (Project to SH) on a qualitative scale (High, Medium, Low), the results are presented in Table 1.

Table 1: Key stakeholders of the construction project

№	Stakeholder (SH)	Influence power	
		SH to Project	Project to SH
1	Construction project customer	H	M
2	End users of the construction project product	M	M
3	Local community	H	M
4	Local government	H	L
5	Government agencies regulating the construction industry	H	L
6	Suppliers and contractors	M	H
7	Foreign project partners	M	M

Let's provide a brief description for each of the key stakeholders.

#### 3.1. Construction project customer

The customer is the stakeholder with the greatest influence on a construction project, as it is the customer who determines the existence of the project. The possibility of the project's influence on the customer can be assessed as medium, the influence is carried out through strategic communications and negotiations.

#### 3.2. End users of the construction project product

The future owners of the project product have a moderate influence on the project, which they can exercise rather through the customer. The impact of the project on them is also moderate.

3.3. Local community

Local communities have a significant impact on a project, from widespread support to closure. The project needs to engage with them in a consistent and careful strategic manner.

3.4. Local government

Local authorities similarly have a high influence. The project should constantly communicate with their representatives, but the impact on local authorities in the project should be considered low.

3.5. Government agencies regulating the construction industry

The state’s influence on the project is the strongest. It is the most important stakeholder along with the customer. The impact of the project on such institutions is low, and therefore it is necessary to constantly carry out and carefully monitor strategic communications with them.

3.6. Suppliers and contractors

These stakeholders have a medium impact on the project, while the potential for the project to impact them can be defined as high. The relationship requires ongoing effective management.

3.7. Foreign project partners

These stakeholders are important for the project, but their influence on the project, and the project’s influence on them, is average. Communication must be constantly maintained.

Based on the research results, we will propose a conceptual model of balancing the values of key stakeholders of a construction project (Fig. 1).

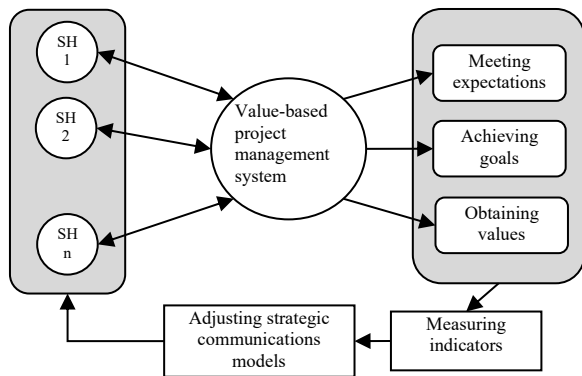


Figure 1. Values balancing conceptual model of a construction project key stakeholders.

The proposed model uses a feedback loop. Value-based project management system constantly carries out strategic communications with stakeholders. At the same time, three indicators are measured for each stakeholder - the coefficient of compliance with expectations, the coefficient of achieving goals and the coefficient of obtaining values. In case of deviation of these indicators from the target value, the models and artifacts of strategic communications are adjusted.

Thus, the target function of harmonizing strategic communications with key stakeholders of a construction project can be represented as:

$$\sum_{n=1}^N (|k_n^o - k_n^{os}| + |k_n^g - k_n^{gs}| + |k_n^v - k_n^{vs}|) \rightarrow \min \quad (1)$$

where  $k$  – compliance coefficients, which are assessed by experts, and  $k^o$  – expectation match coefficient,  $k^g$  – goals,  $k^v$  – values,  $k^s$  – target value of the corresponding indicator,  $N$  – number of key stakeholders in the construction project.

Formula (1) does not take into account the exceeding of stakeholders' expectations, and the corresponding optimization function can be further investigated, which may provide prospects for further research in the chosen direction.

4. CONCLUSION

The modern environment of construction project implementation, which is characterized by a high degree of uncertainty, requires the development of new models and management methods. It is proposed to apply value-oriented management of stakeholder involvement in a construction project, with the allocation of a pool of key stakeholders, based on strategic communications with them. Typical key stakeholders are identified, a corresponding conceptual model is proposed, and the function of harmonizing stakeholder values is described. The proposed approach is aimed at increasing the efficiency of interaction with stakeholders in order to increase the probability of success of construction projects.

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