

# Competence Model and Modern Trends of Development of the Russian Institute of Technical Customer

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**Abstract.** Article considers modern maintenance and development of the management actor by the investment-construction projects of the technical customer. Urgent problems of the formation of Institute of the technical customer establishment are allocated. Elementary competence model is presented: based competences of technical customer, model of the primary competence, example of the operational level of the model. Analysis of the development of the Institute of the technical customer was performed: compliance with current realities of investment-construction activities, improvement of contractual relations, compliance with international standards, state participation, creation of the single technical customer. Necessity of development of competence models for the urgent justification of professional standards is assessed. The possibility of modeling of the competencies and functions of technical customer in approach to the FIDIC-model was revealed. Possibility of usage of the competence model of the technical customer on the stage of building in terms of public-private partnership. Results show the direction for further researches.

## 1 Introduction

Construction contract serves as the main strategic factor in investment-construction activity formation and organization of which is the function of special economic actor. This actor performs a complex of organizational and managerial actions for preparation and design of projecting, construction, reconstruction, engineering support of the real estate, operational commissioning. This actor, which can be determined by technical customer, provides investment-construction activity, forms business infrastructure and manages the investment-construction project.

In accordance with paragraph 22 of Article 1 of the Town Planning Code of the Russian Federation, imposed by the Federal Law from 28.11.2011 №337-FEDERAL LAW, technical customer may be authorized by the developer and enters into contracts and executes necessary documents for construction works, to perform another functions provided by the Town-planning Code of Russia on behalf of the developer. Quality of activity of this actor plays a significant role in the development of investment-construction

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activities and specific projects. As can be seen from the above, there appears research and practice problem of the research, assessment and further optimization of the competencies of the actor of investment-construction project management, which is technical customer.

## 2 Methods

Formation of the competency approach in research, evaluation and organization of investment-construction activities [1-7] logically leads to the necessity of development of the competence model of the management actor. This model represents the system of subjective competencies, which reflects possibility and quality of the investment-construction activity. The list of problems, which can be solved by competence models looks as follows: content of the competencies, assurance of quality and activity assessment, sustainable development of the projects, balance of the economic interests, improvement of regulation and control system, yield increase, etc.

Formation of functional field of each of the participants of the investment-construction activity can be described by competence model, which in the simplest organizational chart "investor - customer - contractor" looks as follows:

$$K_{FM} \leftrightarrow K_{TC} \leftrightarrow K_{TM} \quad (1)$$

where  $K_{FM}$  - financial competences of the investor,

$K_{TC}$  - managerial competence of the customer,

$K_{TM}$  - technical and technological competence of the contractor.

For performance of the main functions, technical customer must have a complex of competencies  $K_{TC}$ , main of which are traditionally the management of investment-construction project at large  $K_{PM}$  (classical primary competence), and construction management  $K_{CM}$  (classical secondary competence), including the control:

$$K_{TC} = F(K_{PM}, K_{CM}) \quad (2)$$

Undoubtedly technical customer becomes a key person of investment-construction project. Basic powers and responsibilities of technical customer [8, 9] for the primary basic competency allow to functionalize competence model as follows:

$$K_{PM} = F(C, T, S, A, R, O) \quad (3)$$

where  $C$  - the conclusion of contracts on performance of engineering surveys, preparation of project documentation, construction, reconstruction, full repair of capital construction projects;

$T$  - preparation of tasks for the performance of pointed type of works;

$S$  - granting to the persons who performs engineering surveys and (or) implements preparation of planning documentation, construction, reconstruction, repair of capital construction projects, materials and documents for performance of the pointed types of works;

$A$  - approval of project documentation;

$R$  - signing of the documents required to obtain permission to put the capital construction projects in operation;

$O$  - performance of the other functions, provided by the Town Planning Code.

Operational level of the model of the technical customer [10] implies a set of n-totally of the functional procedures P:

$$K_{PMP} = F(P_1, \dots, P_n) \quad (4)$$

For example, these procedures can include [10, 11, etc.]:

- collection and analysis of the baseline data;
- registration of land-legal relations;
- holding of the prior consent with authorizing bodies;
- preparation of the technical specifications;
- preparation, development and holding of tenders for the project organization selection;
- definition of the project organization and formation of contract on the competitive basis;
- issue of terms of reference for designing and research;
- development of approved project documentation for construction and individual units;
- examination and approval of project documentation;
- development and approval of detailed design, preparation of estimate documentation, preparation of work schedule, etc.;
- preparation, development and holding of tenders for the project organization selection;
- development of the optimal financing plan schedule for the facility construction, investors risk assessment;
- conclusion of contracts for the construction-installation works performance;
- conclusion of contracts for designer supervision performance;
- other functional processes, which don't contradict the Town Planning Code.

### **3 Results**

Competence model allows to formalize quality of the technical customer activity, to assess its results and identify directions of optimization. Besides, model serves as the basis for development of competence essence of the technical customer. It's important in cases, when the technical customer has an overriding concern in the investment-construction projects, which are realized for the needs of the state or with the state participation. In this regard, efforts on the part of the state on centralization of the Institute of technical customer's activities with formation of the state entity of the single technical customer are accepted. Federal Autonomous Organization "RosKapStroy" was created by the Ministry of Construction and Housing-utilities Sector of the Russian Federation for performance of functions of the single technical customer in the sphere of construction and reconstruction of capital construction projects, which are implemented at the expense of the federal budget [11].

At the stage of formation of the Institute of single technical customer, formation of the professional standards based on the competence models becomes one of the directions of improvement. December 20, 2016 the conference "Implementation of functions of the technical customer in the new paradigm of management activities of the urban planning project" was held. Conference was organized in the light of consideration of the issues of realization of the provisions of the Federal Law from 03.07.2016 No. 372-FEDERAL LAW "On amendments, being made to the Town-Planning Code of the Russian Federation and certain legislative acts of the Russian Federation" [12] with regard to establishment of the new requirements to the technical customer. "Due to Town-Planning and Labor Code of the Russian Federation from July 1, 2017 requirements to the professional standards become obligatory. That's why we need to develop all the required professional standards, regulating the activities of technical customer as soon as possible" - said the deputy director of the Federal Autonomous Organization "RosKapStroy" Pavel Zhbanov [12].

1) Professional standards should have the model support of the competency of the technical customer in all spheres of activity, that in turn, contributes to the approximation of the legal status and functions of the technical customer to the FIDIC-model [13]. It should be noted, that the competence modeling of the technical customer activity allows to

come to the next level of investment-construction activities, that corresponds actual requirements for modern construction business: quality - stability - integrity. Conclusions that the implementation of the FIDIC-contracts conditions to in the Russian practice will contribute to the harmonization of Russian legislation with international standards and fully complies with obligations under the World Trade Organization, the Customs Union and in the dialogue with the European Union, which were taken by the Russian Federation, based on the experience of the realization of the major investment projects in works [14].

## **4 Discussion**

The importance of the discussed issues of professional standards and competence model of technical customer confirms the fact that January 1, 2017 provisions of the Federal Law from July 3, 2016 No. 238-FEDERAL LAW "On the independent assessment of qualification" are came into force. Alexandra Fedorova, the deputy head of the Center of the development of qualifications in construction and housing-utilities sector FAO "RosKapStroy", presented the project of the professional standard "Specialist in technical customer's construction organization", where three common functions are considered: organization of the capital construction, management of the realization of construction projects of capital construction, provision of commissioning of capital construction. Each of the three mentioned functions requires competent supporting, last function, which usually isn't highlighted among the classical models should paid attention to. However, now there comes a tendency of differentiation of the functions and competencies of the actors of investment, construction activities at all stages of the life cycle of the unit.

Expanding development of life cycle stages of the real estate item, using developer approach and assuming various forms of participation of the state in investment-construction activity, model of the operator of public-private partnership should be considered. Direct ratio to the title of the article has a functional component of the construction in all schemes of public-private partnership (BOOT, BOT, BOO, DBFO), which can be related to the content of the technical customer activities. Competence model of the public-private partnership operator in relation to the first component, construction, then is "embedded" in the competence model of the public private partnership with consideration of the second component, which is exploitation. There is a methodological possibility to extend the competence approach in addition to the different actors and entities (organization, company, locality, state, etc.), to the different events (investment-construction project, targeted investment program, public-private partnership, etc.).

1)In addition, currently available experience allows to suggest the other trends of development of the Institute of technical customer functions: standardization of contractual and other construction documentation, algorithmization of management and adjustment of decision-making processes, formation and introduction of the united requirements to the construction objects, creation of banks of the effective typical replicating project and their implementation, improvement of the management efficiency in particular control, etc. This fact can be defined as rational centralization of management, that is particularly important in construction investment projects with participation of the state [15].

## **5 Conclusion**

Competence model of technical customer allows to develop professional standards with the objective of ensuring quality of the investment-construction activity, sustainable development of projects and technical customer, who is actor of management themselves. Conclusion proposed for the reader represents the direction of further researches:

- identification of directions of the technical customer activities amid the realities of modern investment-construction activities,
- selection of innovative function and possibilities of adaptation to the contract activities of FIDIC model,
- detailed development of the competence models and professional standards for all directions of activities of the technical customer,
- linking the competence model with the project life cycle and its performance,
- centralization and usage of the state regulation elements with possible composition of the competence model of the state in this activity,
- development of the competence approach to various actors and the phenomena in investment-construction activity.

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