

The Need for Improving the Quality Management System of Educational Campuses: Russian and Foreign Practices

¹Irina Yu. Belyaeva, ²Olga V. Loseva, ^{*3}Marina M. Pukhova

¹ Doctor of Economics, Professor of the Federal State-Funded Educational Financial University under the Government of the Russian Federation, Moscow, Russia.

² Doctor of Economics, Associate Professor of the Federal State-Funded Educational Financial University under the Government of the Russian Federation, Moscow, Russia.

³ Candidate of Economic Sciences, Associate Professor Federal State-Funded Educational Financial University under the Government of the Russian Federation, Moscow, Russia.

Email: *IBelyaeva@fa.ru*, *OVLoseva@fa.ru*, **Mpuhova@fa.ru*

Received: 29th June 2018, Accepted: 10th July 2018, Published: 31st August 2018

Abstract

The relevance of the problem is caused by the need to formulate a development strategy for educational campuses (HEIs) aimed at improving the quality management system. The objective of the article is to conduct an analytical characterization of the property management system of educational campuses as an element of the development strategy, taking into account Russian and foreign practices. Research methods: general scientific methods of cognition - analysis, generalization, systematization, classification, deduction and induction; dialectical and systemic approaches; methods of statistical research, structural and functional modeling, quality management, theory and practice of managing complex systems. Results of the research: the article examines the features of development strategies of foreign universities, the property management system of New York University, provides recommendations on the development of the Russian property management system of the campus at the macro and micro level; the property management model of Russian campuses. Practical significance: property management of HEIs is aimed at forming a university development strategy and a property management system, and should be aimed at increasing its efficiency.

Keywords: Property, Strategy, Principles and Mechanisms, Management System and Property Management Model, Educational Campus (University).

Introduction

Recently, the issue of the campus quality management, including development strategies, increasing the property efficiency is one of the most urgent. It is also necessary to note the following important aspect: the use of advanced foreign experience in managing educational campuses and the formation of a unified educational space, including its improvement. Every

domestic and foreign university has its own long-term development strategy.

In domestic practice, an important focus in forming the strategy is the issue of regulating property relations in education institutions. Thus, the procedure is regulated by the Procedure for the Establishment, Reorganization, Change of Type and Elimination of Federal State Institutions, as well as the approval of charters of federal state institutions and the introduction of amendments thereto, approved by Resolution of the Government of the Russian Federation No. 539 of July 26, 2010 ("Resolution of the Government of the Russian Federation of July 26, 2010 No. 539", 2016) [1].

According to this resolution, a federal institution can be created through its establishment or by changing the type of the existing federal institution. The decision to establish a federal institution is made by the Government of the Russian Federation in the form of an order. The decision on the liquidation of a federal institution is made by the federal executive body, which exercises functions and powers to elaborate state policy and to regulate in the established field of activity.

In relation to management, it is necessary to note the following: according to the Federal Law on Education (Federal Law No. 273-FZ of December 29, 2012) [2], the sole executive body of the educational organization is the head of the educational organization (rector, director, head) who carries out the current management of activities of the educational organization.

In addition, collegiate management bodies are formed, which include the general meeting (conference) of employees of the educational organization (in the higher education institution - the general meeting (conference) of employees and students of the educational organization), the pedagogical council (in the higher education institution - the academic council), and also the board of regents, the managing council, the supervisory board and other collegiate

management bodies, provided by the charter of the educational organization.

Materials and Methods

In the process of this research, the following methods were used: general scientific methods of cognition - analysis, generalization, systematization, classification, deduction and induction; dialectical and systemic approaches; methods of statistical research, structural and functional modeling.

Results

Development strategies of universities in modern international practice are based on the use of modern information technologies and innovations. Currently, in the world practice a lot of attention is paid to energy-saving technologies in the campus management system. Thus, the University of Queen Mary (London) adopted a strategic development program for energy conservation. The goal is to reduce harmful emissions (carbon output) by 34% from the level of 2005 by 2020.

Nottingham University ranks first in Europe and second in the world in the category of “greenest university” (the most environmentally friendly university), paying considerable attention to environmental friendliness and energy efficiency.

In the property management at University of Queen Mary (London), the Archibus inventory system is used. Currently, CAFM (Computer Aided Facilities Management) is being implemented.

The CAFM system helps in using the organization’s real estate assets, reducing costs and making a profit during each phase of the building’s life cycle. The system is aimed at supporting strategic and operational management of facilities: all activities related to administrative, technical and infrastructural tasks, when an object or building is in operation.

Brandenburg Technical University (BTU) has set the goal of moving all university campuses to sustainable consumption of resources. In 2004, this University assumed the obligation to support the principles of sustainable development, which were spelled out in the Environmental Policy of the University.

The Environmental Management System, established at the University, was adapted to the rules of the Eco Management and Audit Scheme (EMAS III) in 2009. In July 2010, BTU became the first university in Berlin and in the land of Brandenburg, which was listed on the EMAS register.

EMAS requires organizations to voluntarily contribute more to the protection of the environment than required by existing legal norms. In addition, the university’s commitment to the environmental protection must be reviewed by the government and regularly verified by the authorized body, and the

results of their environmental protection activities should be made public in the Environmental Report. Since 2006, the University has been publishing the Environmental Report.

Brandenburg Technical University (BTU) formulated a development strategy that is based on the following environmental principles:

1. The effective use of limited resources.
2. Ecological and energy-efficient requirements for procurement and investment activities of the University.
3. Environmental and energy-efficient requirements for construction, real estate and land management.
4. Professional security measures to avoid environmental pollution from accidents and improper handling of equipment.
5. The compliance with legal environmental standards and the desire to go beyond existing environmental requirements.
6. The dissemination of energy saving knowledge at the University level.
7. Active cooperation in environmental matters with non-commercial organizations, the media and industry.
8. The constant increase of requirements to sustainable development of the University.
9. Protecting the environment as a collective task.
10. The annual publication of the University’s environmental report.

BTU has implemented a full-scale energy-saving program certified at the state level (certification is carried out regularly). Buildings with large footage and low energy efficiency are paid increased attention. New buildings at the University (such as the library media center ITMZ) are related to high-class buildings in terms of energy efficiency. Heating and cooling of air inside the building is due to the energy of the earth, which is achieved by double glazing of the building’s facade.

In Chinese universities, the principle of energy saving is in force: “If you go beyond the limits – pay”. The basis of this principle is the quota of consumption of energy resources. It is determined by three factors:

1. The need.
 2. Accounting of experience on energy consumption for several years (statistics).
 3. The state’s demand for energy consumption.
- There is an automated system for accounting for energy consumption and there is a zone covered by the University, especially for humanitarian faculties. The following zones of energy consumption are distinguished:

1. The blue zone of consumption - the university pays for itself.

2. The green zone is included in the standard, but the faculty pays part of costs for exceeding the quota not at the market rate, but at the preferential rate.

3. The red zone – the payment is made at the market rate.

Thus, motivation to reduce energy consumption is carried out. The system allows motivating and creating personal responsibility of each student and employee of the campus.

The power consumption monitoring system is automated. In order to control and provide security in each room there is an on-line connection. For student dormitories, there is a counter in each room, there is an established minimum energy consumption limit that the University pays, and, if it is exceeded, the student pays the difference on his own.

For Russian universities the most topical issue is the provision of the quality management system of the university, including the use and development of property management. The article represents different groups of indicators (“METHODOLOGY OF ANALYSIS...”, 2001) [3]:

1. The coefficient of the fixed asset depreciation characterizes the degree of the fixed asset depreciation as a whole for the organization:

$$C1 = D / VFA \quad (1)$$

where D - the amount of the fixed asset depreciation at the end (beginning) of the year; VFA - the value of fixed assets at the end (the beginning) of the year. It is necessary to reduce this value by promptly updating and restoring fixed assets. An increase in this coefficient indicates an aging of the material and technical base of the University.

2. Coefficients of building renovation show the actual cost of capital repairs of buildings per ruble of the book value of fixed assets.

$$C2 = (OCE + OCB) / VFA \quad (2)$$

where OCE - overhauling costs, aimed at the needs of the organization out of extra budgetary funds; OCB – overhauling costs out of budgetary funds; VFA - the value of fixed assets at the end (beginning) of the year

$$C3 = OCE / VFA \quad (3)$$

$$C4 = OCB / VFA \quad (4)$$

$$C5 = So / S \quad (5)$$

where So - areas of buildings undergoing major overhaul or reconstruction; S – the total area of buildings

3. Coefficients of rent characterize the specific weight of areas of buildings, both rented and leased.

$$C6 = SL1 / S \quad (6)$$

where SL1 - the area of buildings leased by the organization; S – the total area of buildings.

$$C7 = SR2 / S \quad (7)$$

where SR2 - the area of buildings rented by the organization; S - the total area of buildings. Based on

specific capabilities of the organization, the value of C4 should increase. This will increase financial revenues. The value of the indicator C7 should be lowered, since renting of areas and other material elements of fixed assets leads to the withdrawal of funds, which adversely affects the property efficiency. On the other hand, the reasons that led to the high value of C4 should be further analyzed, since this indicator represents non-core use of assets and potential reserves of the organization.

4. The coefficient of the fixed asset renewal shows the share of fixed assets received during the year in the book value of fixed assets calculated for the end (beginning) of the year.

$$C8 = VRFA / VFA \quad (8)$$

where the VRFA - the value of fixed assets received during the year.

If financial capabilities of the organization allow, it is desirable to increase the value of this indicator, as the wear and tear of fixed assets and their retirement decreases.

5. The coefficient of the fixed asset retirement shows the share of retired fixed assets during the year in the book value of fixed assets calculated for the end (beginning) of the year.

$$C9 = VRtFA / VFAEnd \quad (9)$$

where VRtFA - the value of fixed assets retired during the year; VFAEnd- the value of fixed assets at the end of the year. The value of this indicator should not fall below a certain level.

The analysis of the above indicators allows:

- More fully and reliably determining the state of the material and technical base, the profile use of areas, business activity and the campus development level of the educational organization;
 - Making conclusions on the level of the effective use of federal property by the educational organization as a whole, in the areas of activity, and in respect to certain types of property;
 - Justifying management decisions at the level of the heads of the organization and its structural divisions.
- A modern universal property management system of Russian universities is presented in Figure 1.

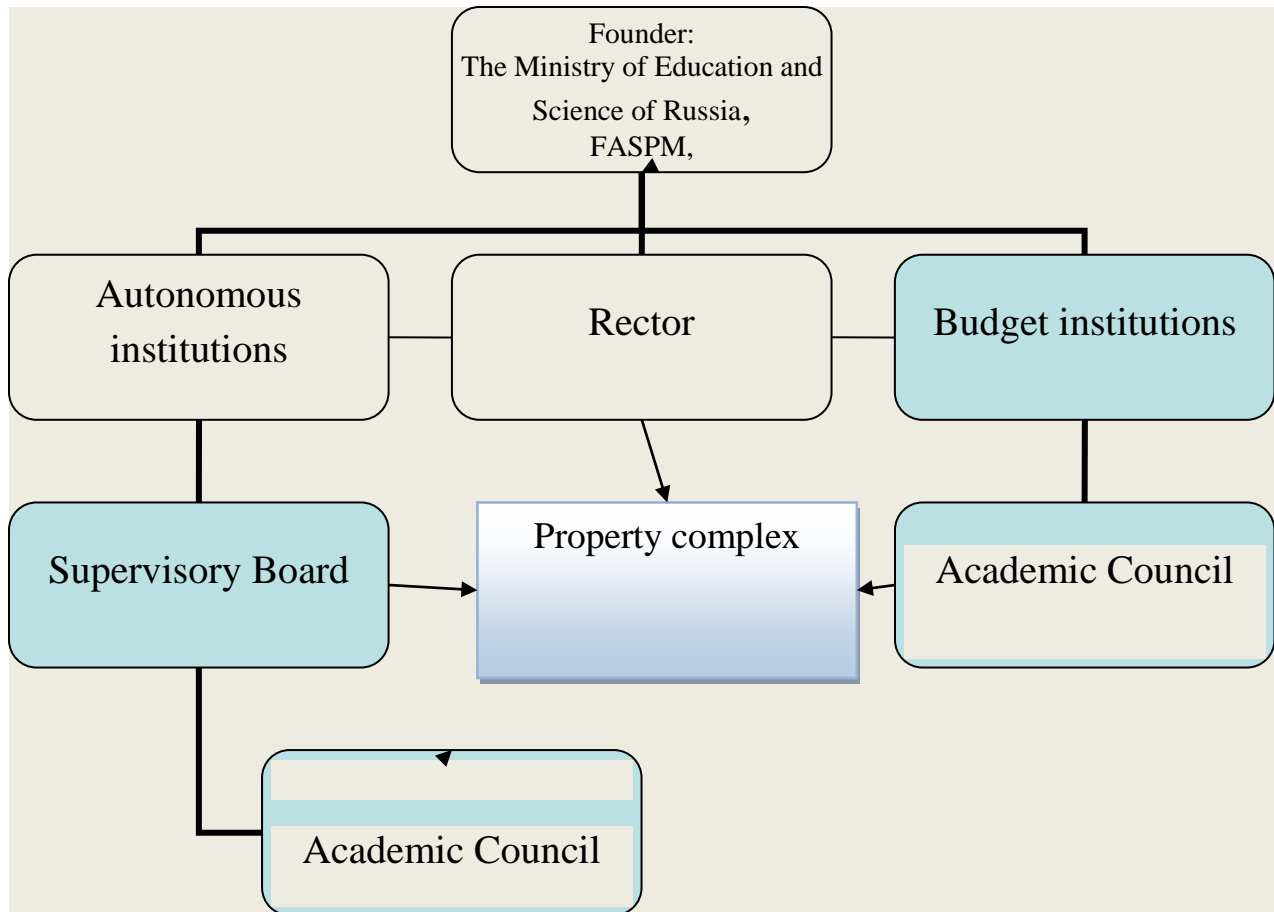


Figure 1. Property Management System of Russian Universities.
Source: Compiled by the Authors.

The functions of the owner as a founder can be performed by the Ministry of Education and Science of the Russian Federation, the Government of the Russian Federation, and the Federal Agency for State Property Management. At the same time, all processes of reorganization and liquidations of universities are conducted only with the consent of the owner within the framework of domestic legislation. The management structure of educational “autonomous” and “budget” institutions varies. In the case of autonomous institutions, all matters relating to property, financial and business activities are considered by the Supervisory Board, which consists primarily of representatives of founders.

The Academic Council of the University is a collegial body that exercises overall leadership of the university. The Academic Council includes: the Rector, the President, the Vice-rectors, as well as by

the decision of the Academic Council - deans of faculties, directors of institutes, directors of branches of the university, etc.

The main property management bodies of the Russian university (Fedotova, 2017) [4] are:

- The founder of the university;
- The Supervisory Board of the university;
- The Rector;
- Profile units that manage the university property complex.

It is proposed to make the following changes to the current organizational structure of the university property management model (Figure 2).

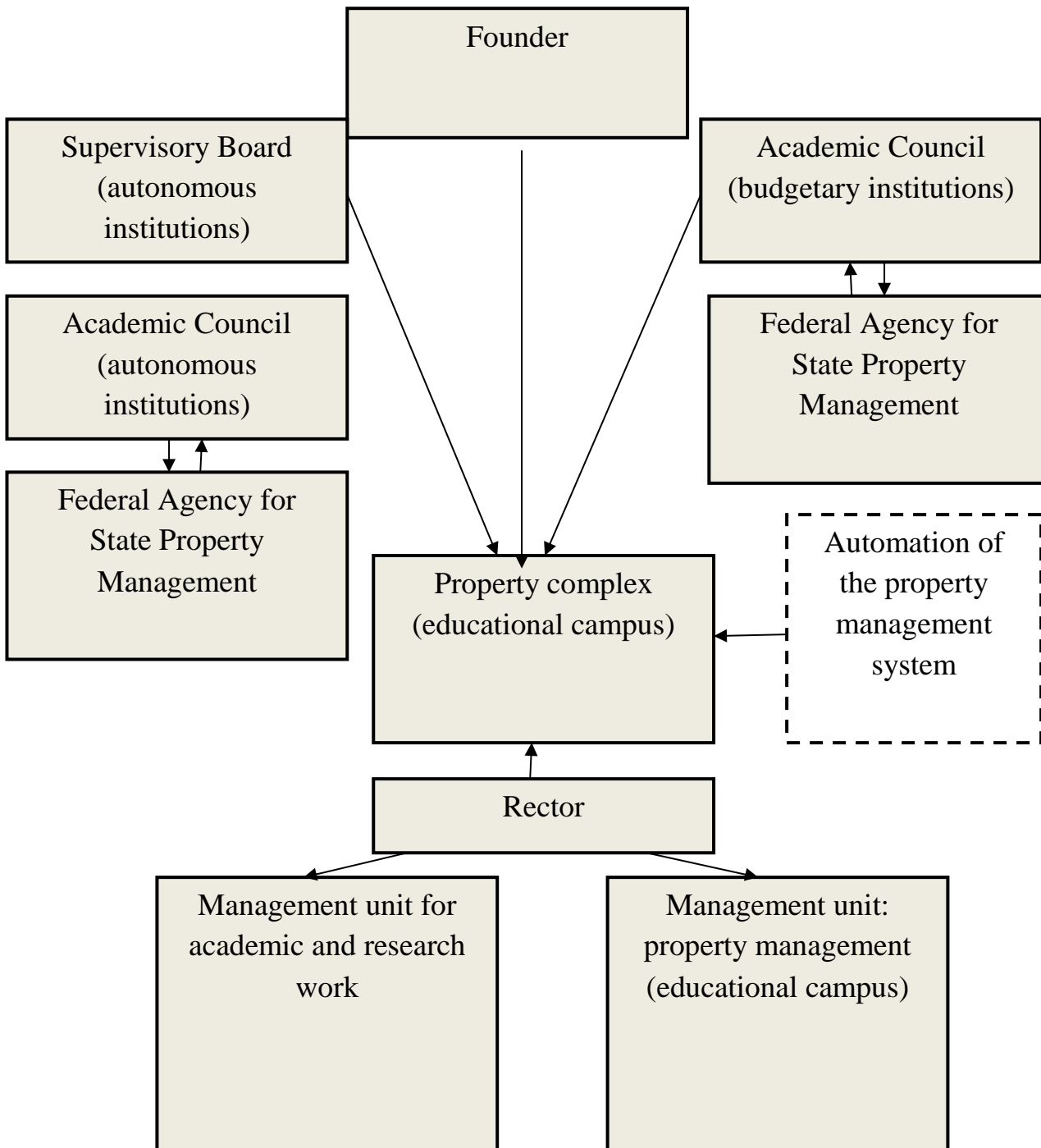


Figure 2. Property Management Model of Russian Universities.
Source: Belyaeva & Pukhova (2016) [5].

It is proposed to expand the powers of the Academic Council, as a collegial management body, and the work collective for property management. To fulfill this task it is necessary (Fedotova, 2017) [4]:

- Create a special commission with the university's Academic Council to control the property efficiency.

The commission should include representatives of operational services for university property management (no more than 1/3), representatives of the work collective and students, representatives of the founder of the university, independent experts.

- It is not allowed to include the representatives of university management (rector, pro-rectors, etc.) in the commission for monitoring the property efficiency.

- The tasks of this commission may be (Belyaeva & Pukhova, 2016) [5]:

- Monitoring the property complex efficiency through internal audit and interaction with the university's profile units,

- Preparation of recommendations for determining the priorities for the development of property management within the framework of the university's development program (strategy);

- Analysis of reporting and results of continuous monitoring of the university's property;

- Timely response to negative trends in the property efficiency and initiation of their discussion at the university academic council with a view to their elimination.

2) The introduction of a separate management unit: property management.

For comparison, consider the property management system of New York University (New York University, NYU), which is a prestigious private research university in the United States, founded in 1831. The University's property complex consists of more than 3,000 colleges and universities in America, it trains more than 50,000 students on three campuses: New York, Abu Dhabi, and Shanghai. The main building of the university is located in Greenwich Village, one of the oldest neighborhoods of New York on Washington Square. It consists of the Elmer Horns Bobst Library, the Silver Building (main building), the Brown Building, the Block Judson Hall, the Vanderbilt Hall and the Townhouse Row, the Kaufman Management Center Center) and Torch Club (Torch Club).

The campus consists of houses for teaching staff and so-called "international houses" - student hostels (for example, the German house - Das Deutsche Haus, the French house - La Maison Francaise, the Italian house - Casa Italiana and others) ("New York University", 2016; For example, "Geography of Canada", 2009) [6-7].

The structure of the campus includes:

- The Center for multicultural education;
- The supply system;
- Health, environment and safety service;
- The system of campuses and buildings;
- Post services;
- International student services;
- The Center for disabled students;
- The Center for Public Utilities;
- The Student Health Center;
- The Transport division;
- Palladium - sports complex;
- The Library complex, etc.

The university campus includes 22 student and two post-graduate dormitories, in which about 12,000 students and post-graduate students live during the school year and summer session. The campus office works in coordination with many departments and student groups to provide and maintain comfortable, safe and secure living conditions for students and staff at New York University. There is an extensive transportation infrastructure that allows you quickly and conveniently navigate all campus areas ("New York University", 2016) [6].

The article represents the main elements of the management structure:

- The Board of Regents - carries out strategic management of the university, including property management. The Board of Regents is responsible for the competitiveness of the institution at the local, national, and international levels. The Board is responsible, among other things, for policy making, mission definition and objectives, strategic planning, program review, and campus issues. The Board of Regents consists of well-known people in the field of public administration, entrepreneurship, science and education.

- The Office of the President is the highest governing body in the university (administrative and scientific issues).

- The Deputy Vice-Rector for Strategic Planning is responsible for the academic component of university-wide planning.

- The Vice-Rector for Administrative and Financial Affairs carries out the financial and operational supervision.

- The Vice-President for Budget and Planning is responsible for the preparation and management of consolidated annual accounts and long-term financial plans.

Thus, in the property management structure, the main role is assigned to the Board of Regents, which coordinates its activities with all other management structures. The campus system has a long period of the formation and functioning, it is constantly expanding, conquering new geographical markets. The campus system provides full, comfortable and safe accommodation on the entire territory of both students and employees. An important role is given to a ramified and convenient transport infrastructure.

Discussion

The development strategy of the educational campus should include the latest trends in education and science, innovative education technologies, and takes into account globalization and formation of a unified

educational space. However, an important issue is not only the educational process and scientific activities, but also the formation of a convenient infrastructure for the educational campus for training, living, etc. In this regard, the campus management system does not lose its relevance.

According to the proposed property management model of universities in the Russian practice, presented in Figure 2, it is necessary to form two control units at the university:

Block 1 - educational and scientific potential management;

Block 2 - property management (educational campus) in relation to the development strategy of the university.

In addition, the allocation of a special property management unit allows more clearly structuring its management, and also ensuring the involvement of specialists in this field. However, the issue of advanced training in property management of higher education institutions remains urgent.

3) To increase the accuracy of reports on the university's property efficiency at the expense of the annual external audit on the effective use of the property complex (possibly by the founder). It seems that the requirements for compiling annual reports and a set of criteria and indicators for the university's property efficiency should be unified.

4) In order to ensure the participation of government authorities in operational control at all stages of the life cycle of the university's property management, timely results of specific actions, it seems expedient to create an appropriate public service with a broad representation of the public vested with authority in monitoring the property complex of Russian universities, conducting ratings of its efficiency, promoting the best abroad practice of property management at universities, the definition of common principles for the property efficiency, etc.

The introduction of a new property management model will make it possible to form a Development program (strategy) for the property complex in general in each institution. Its main sections may look like this:

1. Characteristics of the organization - the main analytical parameters that characterize the organization.
2. The summary of the organization's development strategy (program): the main strategic development directions, supported by calculated indicators of actual users of the property complex, both current and planned;
3. Characteristics of the property complex: the main parameters describing the purpose and condition of real estate, their territorial and spatial situation, the status of registration of property rights, the costs of

maintaining the property, as well as actual use and income from use;

4. The evaluation of the property efficiency. The evaluation should be carried out in the following areas:

- To evaluate the current state of the property efficiency in accordance with regulatory requirements (accounting, registration of rights, content, order of use, order of disposal).

- To evaluate the actual use as an integral analysis of implementation parameters of the core business and parameters of the property efficiency.

5. Program actions to increase the property efficiency. The program actions should reflect the procedure for further use of the university's property complex, including all aspects of its functioning. Their task is to provide a material and technical basis for the development of the organization.

These actions should include all categories of planned transactions with property and ways of using it, including:

- Rent of property;
- Refusal of property;
- Realization of current, major repairs, works on reconstruction;
- New construction;
- Others.

As part of program actions, a set of actions to optimize the costs of maintaining property complexes must be singled out, in which actions should be identified to optimize the costs of maintaining property, including in the framework of energy efficiency activities.

Conclusion

In the course of the study, it was revealed that the status of university property in Russian practice is defined as federal property, which is the right of operational management. The functions of the owner as a founder can be performed by public authorities. The management structure of education "autonomous" and "budget" institutions varies. In the case of autonomous institutions, all matters relating to property, financial and business activities are considered by the Supervisory Board, which consists primarily of representatives of founders.

The main problems related to property management of Russian universities are identified:

1. Quality management of property objects,
2. Inefficient use of high technology equipment,
3. Development of universities as campuses,
4. Lack of campus management culture,
5. Infrastructure modernization of higher education institutions.

Ensuring the quality campus management system is a set of four parameters: the performer, objectives, implementation, control (Loseva, 2016).

1. Executor:
 - Campus manager (vice-rector);
 - Structural unit whose functions include campus management;
 - Co-executors (internal services responsible for the quality campus functioning).
2. Objectives of process management (system):
 - 1) To form a quality campus management system under the authority of the Ministry of Education and Science educational organizations;
 - 2) To reduce expenses for the maintenance of the campus of educational organizations under the authority of the Ministry of Education;
 - 3) To ensure the continuous development of the campus by ensuring the linkage of campus development programs with development strategies of educational organizations.
3. The implementation of the process is carried out through a set of activities aimed at improving the quality of resources, the quality of functioning and development of the campus, the quality of process management (planning, implementation, monitoring and adjustment).
4. The control is carried out annually within the framework of the report at the meeting of the collegial body of the educational organization (academic council) and is annually presented in the framework of the report on the implementation of the development program for the campus efficiency at the Ministry of Education and Science of the Russian Federation.

Acknowledgments

The article is prepared on the basis of the results of the research work: State task of the Financial University under the Government of the Russian Federation "The study of international experience in managing the educational infrastructure: the best world practices in campus management" in 2016.

References

- [1] Resolution of the Government of the Russian Federation No. 539 of July 26, 2010 (ed. on August 19, 2016) "On Approving the Procedure for the Establishment, Reorganization, Change of Type and Liquidation of Federal State Institutions, and Approval of Statutes of Federal State Institutions and Amendments to them".
- [2] Federal Law of 29.12.2012 N 273-FZ (ed. From 19.02.2018) "On Education in the Russian Federation".
- [3] Methodology of analysis and monitoring of efficiency of use of federal property in operational management of educational institutions. *University*

management, Vol. 1(16) (2001). Retrieved from : <http://ecsocman.hse.ru/text/16472788/>.

- [4] Fedotova, M.A. & Loseva O.V. et al. (2017). Development of the management system for the property complex of university campuses: the best Russian and foreign practices: monograph. call. authors, Moscow: RUSS, 144 p.
- [5] Belyaeva, I.Yu. & Pukhova, M.M. (2016). Management of educational campuses. *Economic systems*, Vol. 4, pp. 31-35.
- [6] New York University (2016) In Wikipedia, the free encyclopedia. Retrieved from: https://en.wikipedia.org/wiki/New_York_University).
- [7] Geography of Canada. (2009). In Wikipedia, the free encyclopedia. Retrieved from: http://en.wikipedia.org/wiki/Geography_of_Canada.
- [8] Loseva, O.V., Fedotova, M.A. & Tolstikova, E.A. (2016). Rationale for recommendations on improving the quality management of the property complex of universities. *Municipal Academy*, Vol. 4, pp. 97-106.