



# ИННОВАТИКА-2023



**XIX Международная школа-конференция студентов,  
аспирантов и молодых ученых**

*21–22 апреля 2023 г.  
г. Томск, Россия*



**МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РФ**

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# **ИННОВАТИКА-2023**

## **СБОРНИК МАТЕРИАЛОВ**

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Для студентов, обучающихся по направлениям подготовки «Иноватика», «Управление качеством», «Прикладная информатика», а также аспирантов, научных работников, преподавателей и всех, кто интересуется современными проблемами инновационного развития России и за рубежом.

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# **INNOVATION-2023**

**PROCEEDINGS**

**The XIX International School-Conference of Students,  
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Proceedings of the XIX International School-Conference of Students, Postgraduates and Young Scientists "Innovatika-2023" are presented, at which topical problems in the field of innovation were considered. The publication includes materials from the reports of the sections "Innovative Technologies and Projects", "Information Technologies of Digital Society", "Quality Management", "Innovation Activity: The Unity of Education, Science and Practice".

For students studying in the areas of training "Innovation", "Quality Management", "Applied Computer Science", as well as graduate students, researchers, teachers and anyone interested in contemporary problems of innovative development in Russia and abroad.

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**ПОДХОДЫ К УПРАВЛЕНИЮ РИСКАМИ В ВУЗЕ**  
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**APPROACHES TO RISK MANAGEMENT AT THE UNIVERSITY**

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*The paper will analyze the risks of the main processes and a risk management methodology developed for a university department. According to the research conducted in Russian education, the risk management system in this area is imperfect and not developed well enough.*

*Keywords: risk, risk management, approaches to risk management.*

There are many models and approaches to risk management, such as ISO 31000, COSO ERM, PMI PMBOK, etc. Each of them offers its own tools and techniques for identifying, assessing, managing, and monitoring risks in the company.

In educational institutions, risk management is also an important area of activity, since educational institutions face risks related to finances, safety, students and teachers' health, etc. It is important to conduct risk analysis and develop risk management strategies to minimize possible threats and improve the quality of the educational process.

Non-availability of a qualitative risk assessment negatively affects the effectiveness of educational organizations and leads to a discrepancy between the resources spent and the results obtained. Although there are numerous methods for identifying, analyzing, and assessing risks that can be applied in educational, there is no generalized, standardized methodology. This means that each educational organization can use its own approach to risk management, which can lead to different results and does not always guarantee effectiveness. In this regard, it is important to ensure that educational organizations use risk management models and introduce a standardized risk management methodology into their activities. This will improve the quality of risk assessment and the overall efficiency.

Based on the results of the analysis of scientific works and publications conducted by T.P. Kostyukova, I.A. Lysenko, V.A. Dadalko, E.D. Solovkina, I.I. Novikova, and L.N. Filipova, it can be claimed that the introduction of standardized risk management techniques in educational institutions, such as the risk management model mentioned above, can increase efficiency and quality of the management decisions taken. The introduction of such a model will allow analyzing risk situations, identifying problems, sources, and types of risks, considering alternative solutions, making decisions, choosing methods to influence risk, as well as monitoring and implementing results. As a result, this approach will enable the university to manage risks more effectively, increase the efficiency of the organization, and reduce costs.

E.D. Solovkina suggests using a standardized risk management model in educational institutions, which would include the following stages: creating a risk register, quantitative and qualitative risk assessment, choosing methods and techniques of responding to risks, developing an action plan, organizing monitoring of new risks and the implementation of the action plan. The authors believe that this approach will improve the speed and quality of decision-making in educational institutions. However, as mentioned by T.P. Kostyukova and I.A. Lysenko [1-5], the introduction of a risk management system may face difficulties, such as absence of standards and methodologies developed specifically for educational institutions, difficulties with adapting the methods used, and absence of economic indicators to assess the system's effectiveness, as well as a shortage of specialists and risk management structures.

E.D. Solovkina identifies three main approaches to risk classification and characterizes their advantages:

- Based on identification of primary and secondary features. The approach allows for prompt grouping of risks based on mechanisms and tools for their management.
- Based on identification of external and internal factors. The approach allows you to quickly identify the sources of risks and choose appropriate methods for their management.
- By subjects (personality, society, state). The approach makes it possible to identify risks and their interrelationships more completely. Let us refer to the scientific work of I.I. Novikova (a postgraduate student of the State University of Management in Obninsk), in which the author considers risk management in the university as a set of methods for analyzing and offsetting risk factors integrated into a system of planning, monitoring, and corrective measures. Based on this approach, I.I. Novi-

kova offers her own risk management algorithm at universities, which, according to the author, provides flexibility and adaptability since the results of each stage are input data for subsequent stages and constitute a decision-making system with feedback. The information obtained at each stage makes it possible to adjust both the methods of exposure to risk and the risk management goals themselves, ensuring their most effective achievement [5].

The risk management algorithm of an educational institution presented by the author includes the following stages:

- Determination of risk factors based on macro- and micro-environment analysis;
- Risk identification;
- Selection of risk assessment methods and information;
- Qualitative and quantitative risk assessment;
- Critical value analysis;
- Making a strategic decision on risk management;
- Selection of methods and tools to influence a risk;
- Risk financing;
- Practical implementation of the selected methods;
- Evaluation of the results obtained and their correction;
- Monitoring and revision of risks.

The author believes that implementation of the proposed algorithm will enable forecasting, quantitative measurement of risks in the activities of universities, and financing of measures aimed at preventing the occurrence of risks through a clear description of risk management procedures and mechanisms.

L.N. Filipova (a lecturer at the International Institute of MSEN RANEPa under the President of the Russian Federation) identifies the following stages of risk management:

- Identification;
- -Systematization and analysis (determination of the relationship between risks and the degree of their impact on the system);
- Correction (development of risk reduction mechanisms and tools). The author draws attention to the fact that at the stage of risk determination, it is necessary to take into account adverse outcomes of events, both for the educational institution itself and for the consumer of educational services. The identified risks need to be analyzed in terms of risk factors and their scale (a subject to be affected), since the selected mechanisms and tools for reducing the risk level depend on them.



Thus, having studied the most popular scientific works and publications in the field of risk management in educational institutions, the following points are to be considered when developing and implementing risk management:

- Unavailability of uniform standards and methods of risk management in education, difficulties in adapting the existing methods, and high demand of necessary specialists negatively impact the performance of universities trying to implement a risk management system.
- There is no systematic approach to risk management in educational, partly due to the problems mentioned above.
- Risk management based on decision-making that involves feedback ensures the most effective achievement of goals.
- A clear description of risk management procedures and mechanisms should be an integral part of an educational institution's risk management.
- To give a true picture, the unfavorable outcomes of events for both the educational institution and the consumer of educational services must be considered.

Summarizing the models and algorithms of risk management for an educational institution proposed by the authors, the following general stages can be distinguished:

- Risk situation analysis and identification of risk factors.
- Identification of risks.
- Risk assessment and analysis.
- Selection of methods and tools for risk management (development of measures).
- Risk monitoring and control over the implementation of measures.

The problem of effective management of educational space development of the university fits into the problems of introduction of project management and the opening possibilities, where the basis of the modern educational policy of the university, in view of social development of the society, should be awareness of education as one of the most important institutions of socialization [3]. Indeed, the application of project management for the development of the educational space of the university can significantly increase its competitiveness and ensure stability of the society's functioning.

Project management ensures effective planning, organizing, and controlling various projects aimed at improving the educational process and infrastructure of the university. This approach also promotes innovation in educational ac-

tivities, which can lead to an improvement in the quality of education and attract more students.

In addition, project management allows you to effectively manage risks and avoid possible problems associated with the implementation of projects. In general, the application of project management for the development of the educational space of the university is an important tool for achieving success in education and ensuring its stability and development in the long term [6].

Such an approach will ensure stability of the functioning of society, since it will be supported by citizens who have mastered both professional and general social and personal competencies.

Educational projects not only optimize the current activities of the university, but also have a significant impact on its strategic development. Considering the society's need for higher education, we note that the desire of the society for self-development and self-improvement should be considered its main goal. In this case, it is possible to determine the following basic requirements of the society for higher education: training of highly qualified personnel capable of solving creative tasks, conducting fundamental and applied research, and ensuring progress in all fields of knowledge and sectors of the national economy; education of highly qualified, culturally and morally developed individuals capable of preserving and enriching national culture; developing, together with the health care system, physically fit and healthy individuals through the physical education of students.

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