Organizational and legal models for the creation of scientific projects of the "megascience" class

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Abstract. The creation of scientific facilities of the "megascience" class is a complex and lengthy process, for the implementation of which the resources of several states are usually attracted. As a result of the participation of several states in the creation and implementation of a scientific project of the "megascience" class, a need arises for the distribution among the participants of the rights, duties, expenses and powers to manage the project. In this regard, the article proposes an analysis of the organizational and legal models for creating scientific projects of the "megascience" class, possible taking into account the current legislation of the Russian Federation.

1. Introduction
Realization of scientific projects of the "megascience" class becomes a catalyst for activating the processes of institutional, organizational and informational transformations of Russian science, without which it is impossible to overcome its isolation from advanced research. These projects contribute to the development of high technology industry, the creation of high-tech equipment.

Scientific projects of the "megascience" class are mainly funded by state funds, and therefore, when implementing them, it becomes necessary to take into account the peculiarities of budget financing of the Russian Federation [1] and co-financing from other countries [2], distribution of project management rights, a certain degree of autonomy scientific teams, etc.

These issues are resolved by choosing the appropriate organizational and legal model for creating scientific projects of the "megascience" class, taking into account these aspects. Based on the analysis of the current legislation of the Russian Federation, the following organizational and legal models are possible:

- scientific project of the "megascience" class as a structural subdivision of the base organization.
- creation of a separate legal entity for the implementation of project of the "megascience" class.
- creation of an international intergovernmental organization for the implementation of project of the "megascience" class.

2. Scientific project of the "megascience" class as a structural subdivision of the base organization
Leading Russian scientific and educational organizations are government agencies that are funded from the federal budget. Most of them are created in the legal forms of autonomous and budgetary
institutions. For example, according to the Federal Law of 27.07.2010 No. 220-FZ "On the National Research Center Kurchatov Institute"¹, this center was created in the legal form of a state budget institution.

The advantages of this legal model are:

- maintaining Russian jurisdiction in the implementation of projects of the "megascience" class, which contributes to the control of project implementation.
- property of state institutions is the property of the Russian Federation.
- Russian scientists and specialists have direct access to the most up-to-date fundamental and/or applied data on the basis of direct participation in experimental research on the unique equipment being created.
- the conditions for the implementation of the project ensure the representation of Russian scientists and specialists in key positions in the bodies that determine the ways and means of performing work and conducting experimental research on the unique equipment being created.
- no need to allocate additional funding for the creation of a separate organization for project management.
- the existence of an established scientific reputation and trust in leading Russian scientific organizations.

At the same time, this legal model is not devoid of shortcomings:

- it is impossible to fully take into account the contributions of foreign participants for project management (lack of corporate rights to manage a public institution).
- there is the possibility of restrictions on expanding the circle of foreign participants due to geopolitical risks leading to prohibitions on participation in projects of the Russian Federation.
- the current Russian legislation provides for a number of significant restrictions on the use of property of state institutions and their spending of money, which reduces the efficiency of their activities and leads to excessive bureaucratization.

These regulatory restrictions on the activities of state institutions in the Russian Federation include:

- a special procedure for managing the property of an institution, which is manifested in the fact that an autonomous and budgetary institution is not the owner of the property assigned to them, and therefore, to dispose of real estate and especially valuable movable property, it is necessary to obtain the consent of the owner (founder) (part 10 of article 9.2 of the Federal Law of 12.01.1996 No. 7-FZ "On Non-Profit Organizations"², part 2 of article 3 of the Federal Law of 03.11.2006 No. 174-FZ "On Autonomous Institutions"³). Additionally, transactions with property that the autonomous institution is not entitled to independently dispose of should be reviewed by the supervisory board of the autonomous institution (part 1 of article 11 of the Federal Law of 03.11.2006 No. 174-FZ "On Autonomous Institutions"³).
- a strictly regulated procedure for the procurement of goods, works, services. An autonomous institution makes purchases in accordance with Federal Law of 18.07.2011 No. 223-FZ "On procurement of goods, works, services by certain types of legal entities"⁴ (hereinafter – the Law No. 223-FZ). When funds are allocated from budgets to autonomous institutions for making capital investments in state property to such legal entities, when planning and making purchases at the expense of these funds, the provisions of Federal Law of 05.04.2013 No. 44-FZ "On the contract system in the field of procurement of goods, works, services for the provision of state and municipal needs"⁵ (hereinafter - the Law No. 44-FZ). A budget institution makes purchases in accordance with the Law No. 44-FZ. In this case, a budgetary

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¹ Collection of legislation of the Russian Federation. 2010. № 31. Article. 4189.
² Collection of legislation of the Russian Federation. 1996. № 3. Article. 145.
³ Collection of legislation of the Russian Federation. 2006. № 45. Article. 4626.
⁴ Collection of legislation of the Russian Federation. 2011. № 30 (V. 1). Article. 4571.
⁵ Collection of legislation of the Russian Federation. 2013. № 14. Article. 1652.
institution, under certain conditions, has the right to make purchases in accordance with the Law No. 223-FZ.

- a special procedure for spending money when providing targeted subsidies and subsidies from the budget for capital investments in state-owned capital construction projects. If the subsidy has not been spent in the current financial year, it is necessary to obtain the consent of the founder for use in the next financial year, as otherwise it is subject to return to the budget.

On the one hand, the above restrictions are aimed at increasing the efficiency and transparency of budget spending, but, on the other hand, various types of competitive procedures and auctions can be held for several months, including being recognized as failed, which makes it impossible to carry out operational procurement for the needs of scientific research, disruption of the timing of experiments, etc.

It should be especially noted that article 93 of the Law No. 44-FZ does not contain grounds for concluding a contract with a single supplier for the supply of unique scientific equipment, and therefore it is necessary to conduct competitive procedures.

The above restrictions cause a certain "slowness" of state institutions, forced to comply with a large number of formalized procedures. In the conditions of penalties for violation of procurement legislation, budget legislation, for the effective implementation by state institutions of projects of the "megascience" class, it is necessary to provide them with certain relief.

Firstly, the possibility of providing real estate and especially valuable movable property involved in the implementation of projects of the "megascience" class in a simplified manner, including by foreign scientific and educational organizations.

Secondly, the possibility of procuring unique scientific equipment necessary for the implementation of projects of the "megascience" class from single suppliers, including foreign ones.

Thirdly, simplified (accelerated) procedures for obtaining the founder’s consent to use unused balances of targeted subsidies and subsidies for capital investments provided for the implementation of projects of the "megascience" class in the next financial year.

Fourth, the simplification of the procedure for attracting foreign scientists to work when implementing projects of the "megascience" class in the Russian Federation (including the provision of benefits by analogy with article 16 of Federal Law of 28.09.2010 No. 244-FZ "On the Innovation Center "Skolkovo" - exemption from the obligation to receive project permits to attract and use foreign workers, invitations to enter the Russian Federation in order to carry out labor activities, as well as permits to foreign citizens are issued without regard to quotas on their issue, established by the Russian Federation Government).

Fifthly, exemption from customs duties and value-added tax on goods and equipment imported for the purpose of their use in the construction, equipment and technical equipment of facilities related to projects of the "megascience" class (according to article 150 of the Tax Code of the Russian Federation, lists of technological equipment and consumables for research exempted from import tax are approved by the Government of the Russian Federation).

Sixth, due to the high cost of buildings, structures, equipment used in the implementation of projects of the "megascience" class, it is advisable to provide tax incentives for corporate property taxes and land tax (for example, according to part 15 of article 381 of the Tax Code of the Russian Federation state scientific the centers are exempted from the obligation to pay corporate property tax).

Confirmation of the correctness of the implementation of projects of the "megascience" class based on established and internationally recognized organizations is the world experience: the creation in the last 2-3 decades of a new generation of large research infrastructures, even in developed countries, with their "culture and mentality of mobility" occurs as a rule, in those centers where there is a corresponding history - SLAC (Stanford, USA); GSI and the FAIR project created on its basis (Darmstadt, Germany), etc.

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6 Collection of legislation of the Russian Federation. 2010. № 40. Article. 4970.
7 Collection of legislation of the Russian Federation. 2000. № 32. Article. 3340.
A similar practice is applied during the DUNE experiment by the mega-installation Long Baseline Neutrino Facility (LBNF) under the supervision of American scientific organizations, primarily the National Accelerator Laboratory named after E. Fermi (Fermilab). To attract foreign partners, an international scientific collaboration DUNE has been created around Fermilab. The rules for its functioning are established by Fermilab, which is subsequently amended and supplemented by the governing bodies of the collaboration, a regulatory act called DUNE Collaboration Management. Collaboration DUNE does not have legal entity status [3].

3. Creation of a separate legal entity for the implementation of project of the "megascience" class

In world practice, there are options for implementing projects of the "megascience" class by creating a legal entity with the legal personality of one of the participating states. The advantages of this legal model are:

- ensuring accounting of the contributions of foreign participants for project management (distribution of corporate management rights).
- the creation of an organization with Russian jurisdiction does not require significant changes in the regulatory framework of the state.
- lack of regulatory restrictions on the use of the property of the organization and the expenditure of funds inherent in state institutions.

Moreover, in this model there are also disadvantages:

- the need to allocate additional funding for the creation of the organization and its staff.
- de jure, the property of the organization is private property, and members of the organization lose their ownership of the contributed property.
- lack of trust in an organization that has not yet had time to establish itself.
- lack of tax benefits due to the application of the general tax regime.
- there is a possibility of restrictions on expanding the circle of foreign participants due to geopolitical risks leading to bans on participation in "national" projects of the Russian Federation.

For example, an international project for the world 's largest free electron laser to monitor chemical reactions, the European Free Electron X-ray Laser, is being implemented through the establishment in the Federal Republic of Germany of the European X-Ray Free-Electron Laser Facility GmbH [4]. Each participating state contributes to the charter capital of a company.

On the one hand, the choice of organizational and legal form in the form of an limited liabilities company, which is essentially a commercial organization created for profit, seems specific, but on the other hand, corporate law, which regulates the management of the organization, is quite well developed in relation to commercial organizations. The establishment and operation of the European X-Ray Free-Electron Laser Facility GmbH is governed by the relevant international convention signed by the participating states.

Similar practices in the Russian Federation are questionable, although there are no legislative prohibitions. In general, the creation of limited liability company or joint-stock company for the implementation of project of the "megascience" class will allow to fully take into account the deposits of each participant (shareholder) of the company by holding the corresponding share in the authorized capital (number of shares), as well as by exercising the corresponding powers to manage the company. Also, the participant (shareholder) of the company receives certain guarantees of receipt of property or monetary compensation of its contribution in proportion to its share when leaving the company or its liquidation. However, taking into account the fact that projects of the "megascience" class are aimed at carrying out fundamental scientific research and solving scientific problems of world scale, the commercial organization will not have significant independent sources of income.

In this regard, a more appropriate type of legal entity for the implementation of project of the "megascience" class is a non-profit corporate organization, i.e., which does not pursue profit as the main purpose of its activities and does not distribute the profit received among the participants, whose
founders (participants) acquire the right to participate (membership) in them and form their highest governing body (general meeting of members).

In accordance with chapter 4 of the Civil Code of the Russian Federation, non-profit corporate organizations are established in organizational and legal forms of consumer cooperatives, public organizations, associations (unions), notary chambers, real estate owners associations, Cossack societies, as well as communities of small indigenous peoples of the Russian Federation.

It should be noted that, first, these organizational and legal forms do not fully reflect the specifics of the activities of scientific organizations. Secondly, each member of a non-profit organization has one vote regardless of the degree of participation in the formation of the property of a non-profit organization, which creates risks of incomplete consideration of the interests of the Russian Federation in the implementation of projects of the "megascience" class with a significant amount of budget financing.

In this regard, a certain problem is the absence in the Russian legislation of a legal form of a corporate non-profit organization, which takes into account the contributions of participants for the formation of management bodies of a non-profit organization by analogy with joint-stock companies.

4. Creation of an international intergovernmental organization for the implementation of project of the "megascience" class

The creation of an international intergovernmental organization to create and operate a unique scientific facility of the "megascience" class is a common practice in the world.

The advantages of this legal model are:

- accounting of contributions of foreign participants for project management is ensured (distribution of corporate management rights).
- traditional privileges and immunities of international intergovernmental organizations [5].
- functional privileges and immunities of employees of international intergovernmental organizations.
- international legal personality of international intergovernmental organizations.
- minimization of geopolitical risks, which allows attracting foreign participants to participate in projects. However, the risks of failure to cooperate cannot be completely excluded due to various reasons for their occurrence. In particular, the USA considered the possibility of withdrawing from the project of the International Experimental Thermonuclear Reactor ITER, while jeopardizing its implementation [6]. In modern conditions of serious changes in the economic and strategic structure of forces and interests in the world, significant fluctuations in the situation of associations and alliances between different states, the corresponding situation in various "alliances" has a diverse influence on the directions, types and forms of international cooperation. One example of this kind is the scientific and technical interaction of the countries of Europe and the European Union with the Soviet Union, and now with the Russian Federation [7].
- the absence of regulatory restrictions on the use of the organization’s property and the expenditure of funds inherent in state institutions, since this procedure is determined by the organization itself or by an agreement on its creation.

An example of the implementation of project of the "megascience" class in the Russian Federation using this legal model is the Joint Institute for Nuclear Research (JINR, Dubna), which is an international intergovernmental research organization established in accordance with the Agreement on the Organization of the Joint Institute for Nuclear Research studies of 26.03.1956. JINR carries out its activities on the principles of its openness to the participation of all interested states and their equal mutually beneficial cooperation. There are currently 18 states members of JINR.

Features of the legal status are defined in the JINR Charter, the Agreement on its organization and the Agreement between the Government of the Russian Federation and JINR on the location and

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8 Collection of legislation of the Russian Federation. 1994. № 32. Article. 3301.
conditions of JINR’s activities in the Russian Federation⁹, signed in Dubna on October 23, 1995. Taking into account the international character of the organization, it has been removed from the action of part of the requirements of Russian legislation (immunities); moreover, various kinds of privileges and concessions are provided for it: tax, customs, etc.

However, the JINR status has certain drawbacks from the point of view of state financial control, because by virtue of the Protocol of March 4, 1987 to the Agreement on the Organization of JINR, signed in Moscow on March 26, 1956, the contracting parties agreed to apply to JINR the provisions of articles I, IV - XVI Convention Concerning the Legal Status, Privileges and Immunities of Interstate Economic Organizations Active in Certain Spheres of Cooperation, signed in Budapest on 5 December 1980. Accordingly, the financial activities of JINR are not subject to the control of the central or local authorities of the host state.

This legal model is also not without drawbacks:

• the need to provide additional funding for the establishment of the organization and its staff. According to national scientists, employees of international organizations receive excessive salaries and enjoy excessive tax and other benefits arising from their privileges and immunities. For example, as noted in his interview by the head of the project development team of another international installation of the "megascience" class - the European Synchrotron Radiation Center (ESRF), he and his colleagues deliberately rejected the status of an international organization of CERN type, as it is very expensive [8].

• the establishment of an international organization requires changes in the regulatory framework of the host state.

• de jure the property of the organization is not state property, and the members of the organization lose ownership of the contributed property. For example, the share of the USSR in the financing of JINR at the time of its establishment in 1956 was set at 47.25% of the total funding [9].

5. Conclusion

Even in a difficult foreign policy environment, science, innovation and education are among the unifying areas in which international cooperation continues to develop. Such international cooperation is being implemented at the universal, regional and bilateral levels, each of which is capable of complementing each other and creating momentum for further inter-state cooperation [10].

Taking into account that projects of the "megascience" class will be implemented in the territory of the Russian Federation with the involvement of federal budget funds, the absence of state financial control poses certain risks to the interests of the state. In this regard, it seems advisable to implement scientific projects of the "megascience" class on the basis of existing scientific organizations with additional benefits and to reduce the burden of formal procedures.

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