

**Vladimir M. Davydov**  
**Corresponding Member of RAS**  
**Academic director, Institute of Latin America**

### **Technology Alliance - an option for BRICS**

There is no need to emphasize the importance of scientific research, technological progress and the practice of innovation at the present stage of world development, and even more so taking into account the long-term prospects. We have thoroughly covered the topic of the technological revolution in recent years. Including at previous BRICS academic forums. There is an appropriate bibliography. The topic of technological shifts and their economic, social and environmental consequences was analyzed in key reports by the UN, UNIDO, UNCTAD, ECLA and several other regional and sectoral structures of the United Nations system.

Among the various options for determining the global situation that are now identified in assessments of the upcoming global transformation, I prefer the formula for a long transition period during which there is an unprecedented in depth, scope and quality **replacement of the reproduction mode of the world economy and the system of international relations.**

For the BRICS member countries, this is a strategic challenge. Their ability to turn technological progress to the benefit of the dynamic growth and quality development of the economy that have emerged in the five countries since the turn of the century must pass a serious test. Obviously, success or failure determines the consolidation or weakening of the tendency to ascend new centers of power and influence (primarily in the person of the BRICS Five).

With the exception of certain segments of technological progress, the BRICS countries, which have significant own potential, still were mainly in the second echelon of technological and economic renewal. Moreover, the situation in our countries is complicated by the imposition of some transformations on others. The transformations that are dictated by the upcoming global transition are superimposed by those associated with tasks related to overcoming the legacy of past eras. Thus we can talk about a kind of **transition in the transition.**

BRICS as a mechanism of multilateral strategic partnership has a mandate to develop and implement joint projects and programs aimed at strengthening the economic, technological, scientific and educational potential of member countries, and

increasing their competitive advantages in the world market. And in this regard, it is obvious that cooperation in the innovation sphere is becoming a common priority. Each of the BRICS member countries has its own advantages in certain areas of science, technology and innovative practice. Leading in these areas, each of them is able to contribute to the common cause of establishing the innovation process in accordance with global practice and the prevailing global trends.

Obviously, the technological sphere (in the broad sense), including research, training highly qualified personnel, applied developments, their use to improve production and management processes, as well as the development of market space for the implementation of created innovations (whether in the form of goods or services) , came to the forefront of strategic imperatives. Given the features of the current stage, we can confidently say that it is on the path of technological renewal where we see the key chances of strengthening positions in the world market and indirectly in world politics.

The BRICS countries have already shown a political will to translate their joint activities into practice. The first fruits are evident: it is enough to refer to the New Development Bank and the Pool of Conditional Reserve Currencies. There is already a practice of cooperation in the energy sector, in the implementation of infrastructure projects and other subjects.

The current BRICS model, as you know, does not imply institutional integration, but at the same time implies the advisability of combining efforts and means in the joint implementation of large-scale, significant projects. In our opinion, this logically corresponds to the purpose of the **multilateral strategic partnership mechanism**, which is the BRICS union. Based on this, we are convinced that the implementation of a kind of technological alliance can start in the BRICS format, which should now be considered as one of the central areas of cooperation in the BRICS format.

Attracting attention to cooperation in the technological and innovative sphere has not only practical, but also pragmatic meaning (that is, prudently adapted to the current situation). And since the range of ideological and political orientation of the "five" members has increased in the BRICS format, it is advisable to focus on innovation issues in an increased degree, where the combination of national interests and key tasks seems quite logical and mutually acceptable.

Considering the creation of a **technological alliance (TEAL) as a strategic imperative**, it is necessary at the level of the prevailing public opinion to ensure that it is perceived in that quality and in addition to create stimulating conditions for interaction between the state, civil society and the business community.

When implementing the idea of TA, in our opinion, it is especially important that, with minimal institutionalization, ensure the involvement in practical cooperation of

the maximum number of active actors of technological updating from all countries participating in the five-sided format. In addition, it is important that the proportions of the main stages of passing through the innovation implementation chain (from the research stage to the commercial sale of the product) are observed in a cross-border format. In the organization of all activities within the framework of TEAL, it is desirable to combine two principles: network and hierarchical. On the other hand, the proper effect cannot be achieved without a mutually acceptable formula for liberalizing access to each other's markets in order to implement joint technological renewal projects.

Finally, the creation of a technological alliance is necessary and appropriate to link with the priorities of sustainable development, as they are formulated in the Resolution of the UN General Assembly in 2015. In this case, it is not only about orienting the joint projects of technological updating towards solving the problems of sustainable development. It is important to achieve a simultaneous effect both on the field of sustainable development and on the field of transformation in line with the tasks of double transition (as we discussed above).

Our proposal for a technological alliance does not seem to reveal many precedents in world practice. Meanwhile, some elements of such a system can be found in the practice of UNIDO. Although we are now talking about a new initiative, in the practice of the functioning of our association there are already some prerequisites that allow us to start work not at all from scratch. We draw attention to a number of significant aspects and available results.

Perhaps, first of all, we should talk about institutional and financial measures in order to stimulate the diffusion of innovations over borders in the BRICS format. This, of course, means the development and implementation of a system of preferences in order to expand access to the BRICS partners' markets for technologies and new products, services, for know-how, etc.

Secondly, this refers to the establishment of contacts and ties in the training of personnel for scientific research and innovative practice. The solution to this problem already has an encouraging premise created by the first steps in organizing the BRICS network university.

The third premise is the cooperation of national government bodies, which are responsible for coordination, for policy in the scientific, technical and innovative sphere. There is reason to state that the process has already started here. Corresponding contacts are established, regular consultations are held. But, strictly speaking, we are still talking about the first steps.

Fourth. We can note with satisfaction that the first steps have been taken in the interaction of structures specializing in project financing of research and innovation.

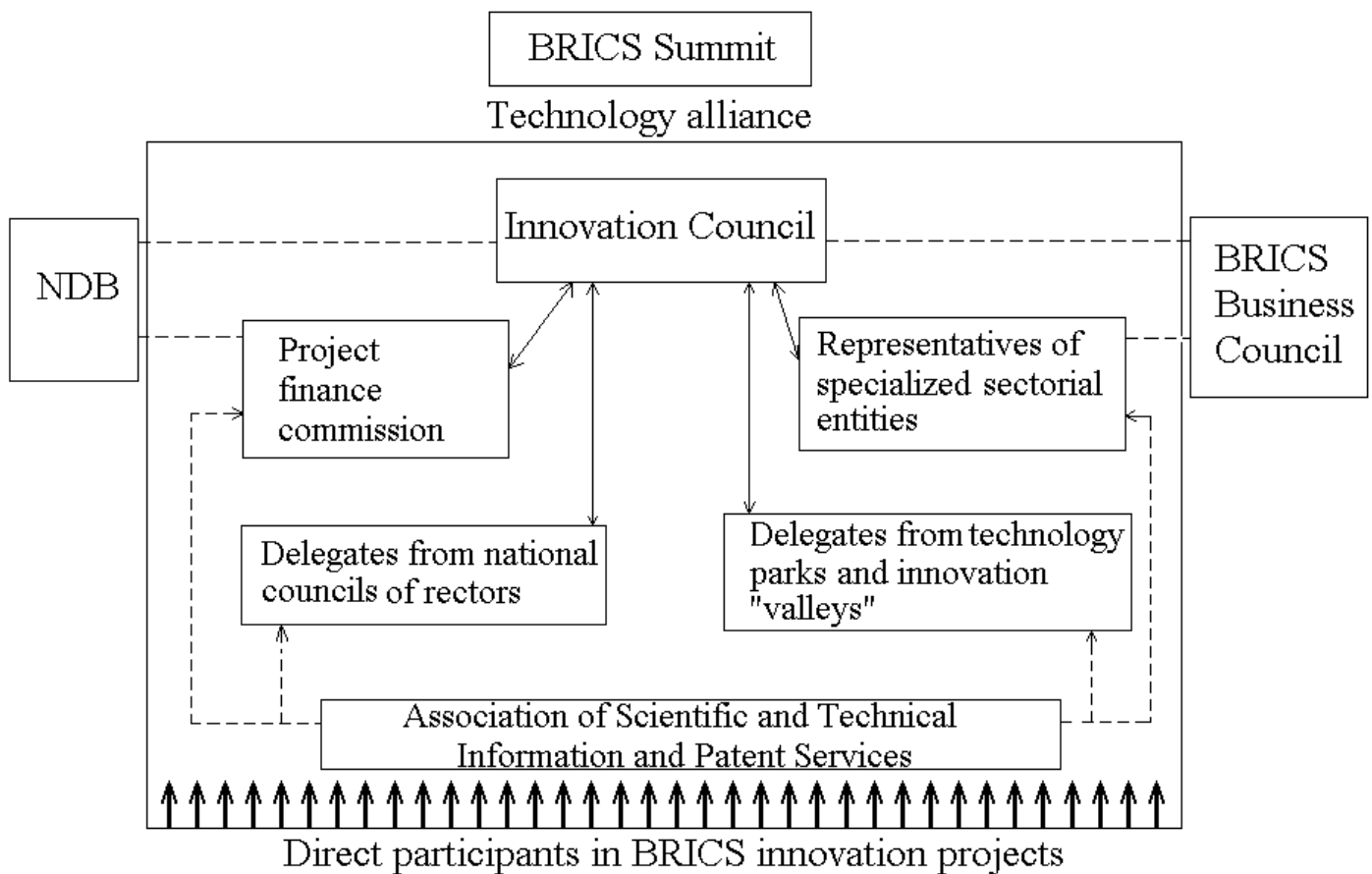
At the same time, co-financing programs with the participation of two or more partners from the BRICS countries entered into practice. On the Russian side, the Russian Foundation for Basic Research is participating in such programs.

Fifth. An important area is the interaction of national patent services. At the moment, they still take into account the insufficient part of the results of research, design and engineering practices on a national basis, on the one hand, and on the other, remain a narrow channel for translating the achievements of foreign practice into national soil. According to our information, the experience of cooperation of patent services in the BRICS format is still minimal.

We associate the sixth circumstance with information and exhibition activities. It is possible that regular exhibitions (forums) of the achievements of science and technology of the BRICS countries can give positive results. They can be held with a one-year or (at the first stage) biennial regularity, timed to coincide with the next summit.

Seventh. A prerequisite should be the creation of the foundations of the interaction between technological (industrial) parks or zones of preferential functioning of startups.

To clarify our ideas about the content of the TEAL project, we offer a conditional scheme for its composition, which we designate only as a working hypothesis (see diagram), intended for critical discussion.



The highest authority coordinating the participation of the BRICS countries in the technological alliance can be represented by an innovative council, which is formed by officials at the level of deputy prime ministers in charge of science, higher education and innovation.

It is advisable to focus the functions of the council on strategic decisions regarding major cooperation projects, bearing in mind the coordination of their implementation in the five-sided format. In addition to a member of the council, it is advisable to identify a “Sherpa” who will carry out specific coordination work on contacts with organizations and enterprises of his country participating in specific TEAL programs.

We associate another element of the TEAL structure with the coordination work of representatives of the relevant sectorial authorities, on the one hand, and on the other, with the functioning of the project finance commission, which can and should work in collaboration with the New Development Bank.

The delegates of national councils of rectors representing innovatively active universities can play a positive role in organizing cooperation. Not all BRICS countries have developed networks of technology parks and innovative “valleys” on

a fairly solid basis. But whether at the initial or advanced stage, it is important to ensure their representation on a broad basis by the BRICS.

The need for the active use of scientific and technical information and patent services, which can be combined by a kind of association, is obvious.

When raising the question of creating TEAL in the BRICS format, we do not exclude it, but assume the possibility of other initiatives in the field of cooperation in ensuring technological progress and active innovative practice. We only want to emphasize the urgent need for collective advancement in this direction.