

Mikhail Prokhorov's speech during the 4th Annual National Business Congress

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Good morning. Dear colleagues I would like to say a few words about making the innovation breakthrough happen.

In order to understand how this can be done, one must first understand the environment in which we work. The process of globalisation is now upon us and it reminds me a great deal of the colonial conquests in the 18th and 19th centuries, the only difference being that these are now happening in a new stage of human evolution. Today the land we conquered as a commercial asset has now been replaced by intellect, information space, and natural resources.

In some sense, to estimate the innovation breakthrough we need to realise that national frontiers in the economics of the innovation process have been erased. This brings us to a series of interesting conclusions.

Conclusion 1: You cannot build an innovation economy in an individual country. However, within the world you can build one for yourself. Therefore, our task is to get a piece of the innovation cake and allocate it to our own territory.

Conclusion 2: During the last 20 years over half a million scientists and technicians from Russia's elite have left the country. From this we can draw the following conclusion: if organised correctly in the modern conditions of the innovation process this can become a competitive advantage rather than a disadvantage. It is crucial to have enough intellectual people in the country, which is the case for Russia. In addition to this all those who left Russia now work in the leading markets of scientific research and can be the voluntary agents to promote our innovation products.

And finally,

Conclusion 3: The old competitive advantages now become more and more problematic. Everyone knows that the traditional industrial parks are collapsing and we are all aware of the problems in Silicon Valley. Today innovation businesses have started to modernise their approach. 24 hour project management has become a classic example of this. World leading companies are opening 24 hour project offices across various countries so they can work on projects 24 hours a day. The service then becomes non-stop. Instead of being managed for 8 hours a day they are managed continuously for 24 hours.

However we need to realise that there remain certain difficulties in place. In order to overcome these effectively we must recognise the following:

Firstly, the people in our country no longer set systematic goals, nor do they implement these methodically. **Secondly**, there is a gap between science and business. Western products are bought more easily; these are then integrated into businesses, while science simply becomes an element in a chain of western projects. This is what the interchange is based on; there is no bridge between science and business. **Thirdly**, there is hardly any market [in Russia] to produce innovation products. If there are some being produced there is no system in place, it comes in bits and pieces. As for the intellect, there is an issue here too. The intellect in Russia and that of the Russian scientists in particular, is very high but again there is no system, it is not used to accomplish strategic tasks or work on certain priorities.

Therefore, to find a solution, I believe, we need to put together 5 elements. **The first** is the role of local and fundamental science, **the second** are the competitive advantages of Russia, **the third** is the construction of an innovation infrastructure, **the fourth and the fifth** are the ways to choose priorities and define the interaction of the government and the business on the innovation platform.

Now I will elaborate briefly on these elements. On fundamental science: I believe that it can be nominally divided into two parts. The first part is the funding of the level of scientific environment, which is a very important governmental function. This includes the mathematics, the theoretical physics, the intellectual level that makes the intellectual country different from a non-intellectual. The second part is the funding

of fundamental developments aimed at a definite breakthrough.

On the interaction between government and business: I would single out three tasks here. The first task is for us to choose collectively an innovation model that would satisfy everyone. Because old successful models have now stopped working (I will elaborate on the problems of industrial parks further) we need to create our own unique Russian model. Obviously, I recommend not ignoring the global experience; instead I advocate the creation of some kind of hybrid too incorporate the best elements of the American and Chinese models. This would bring together the clear project management which characterises the American model, and the high speed of innovations and the prompt reaction to the changing market, which is typical for the Chinese model.

The second task to be solved is to understand what the government and businesses should do. To explain in simple words I would say that the government chooses seeds, cultivates the sprouts and the business then helps the trees grow and only then produces paper, cellulose and all the other ready to use goods. The third task is to collectively define the priorities of development, i.e. what markets we choose to develop.

The other important issue is the innovation infrastructure. Today classical industrial parks are collapsing globally because of globalisation. What is a classical industrial park?

It starts with an idea then it grows into scientific works, engineering and design, experimental development, then industrial equipment, short-run production, and finally production itself.

Because the internet made communication global, this chain began to fall apart. Instead of industrial parks there are now scientific integrators. In a scientific integrator there might be up to 10 people working. These are people who understand the market, set a goal, divide it by elements and then order its implementation worldwide. The product is then tested in a high standard laboratory and the intellectual product is sold worldwide.

Of course it is not possible to go from industrial parks straight to scientific integrators. That is why our specialists, who worked with me, have suggested the introduction of an intermediate stage.

We call it an industrial hub. Its main task is to concentrate the intellect i.e. to build several super modern scientific centres with multi-purpose laboratories that would represent various fields of knowledge. The main goal of the industrial hub is to close the gap between science and business: to make ideas become innovations, innovations become technologies, technologies are then documented and the business takes it from there and real production starts. Therefore, the goal of the industrial hub is to be the missing link in our innovation process.

I would like to say a few words about the priorities. I believe we do not have to reinvent the wheel.

The innovation breakthrough should happen at the level of key issues of humankind – these are **energy, ecology, water purification, food, and the new one – the issue of transporting due to increased energy costs**. Studies show that if the current tendency of energy [cost] growth remains and progresses, in seven years only about 10 percent of population will be able to afford the transfer.

Therefore, here are the priorities. Imagine a pyramid divided into 3 parts. In its first part we should create new markets and get high interest from these new markets.

I will name four competitive advantages that Russia has for you to understand why I believe we should choose these markets.

The first competitive advantage is Russia being a giant energy power, with vast natural resources deposits. **It is our destiny to make the innovation chain longer**. The second advantage is Russia being a great transition and transport-transition power. We can connect various markets. The third advantage is the increased creativity of Russian people, which is recognised worldwide. The fourth advantage is our historical tradition of solid and fundamental science.

Thus, I would single out the following opportunities at the first level. The first is alternative energy. I believe it is crystal clear that a transition needs to be made from non-renewable energy sources to renewable ones. The question is when it will become real. Instead of discussing it, it is necessary to take supremacy in the palm of our hand.

I would define hydrogen energy, the sun, the wind and nuclear energy as alternative energy sources. In nuclear energy the task is to expand the possibilities of uranium usage, the performance index of which is currently 1,5 – 2 percent. If we do not increase the use of uranium significantly we'll run out of natural resources globally in 100-120 years. Therefore, the key problem – to provide the population with energy – will not be solved.

The second direction is catalysis. It includes everything that has to do with water purification, ecology, ecological transport, and ecological production. We have a very strong basis of catalysis. We need to create markets that will produce and sell these scientific products worldwide.

The third direction is education, i.e. the maintenance of the high level of intellect. We have a vast territory but unfortunately not a high enough population. Globally we cannot compete with China and India in terms of their huge workforces but we must compete on an intellectual level. Intellect today brings more than simple or expanded reproduction.

The next direction that we could consider is agriculture, no matter how paradoxical it sounds. There is a field where Russia is the first in the world, it is seed-framing. We have unique seeds that can be used to create unique hybrids to be sold all around the world.

And finally the last direction, the most disputable one is alternative transport. Our country covers nine time zones. If the price of raw materials keeps growing flights and transfers will become impossible.

That is why one can never get from Kalinigrad city to Vladivostok city. This is what I call real markets and their creation.

The second level is the key providing sectors. One of these is material science which includes nanotechnologies. The latter is extremely important, it is important for innovation markets which have qualified customers and demand for new materials. I would refer to chemistry, mathematics, biotechnology, molecular biology and some others as providing sectors.

The third level is the ordinary innovation market which develops as the country develops. These are the opportunities of the business of any level to develop in a certain direction and to overcome say, mental laziness, to invent and to beat not only local but also western rivals.

The last and the most important point is the creation of trends for innovations. This is a powerful stimulating incentive. In this sphere there lies one of the most important and rational tasks of the government as well as that of business. It should be prestigious to develop innovations that both the elite and non elite can exchange, not only the usual gossip, but also views on the innovations they promote on the markets.

To conclude I would like to say that I believe we have all the possibilities and no significant obstacles, it is all in our hands and we are capable of making the innovation breakthrough happen. Thank you.