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Realizing Russia's Potential
RUSSIAN AMBITIONS FOR INNOVATION – HOW TO FULFIL THEM?
Panel Discussion

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Moderator:

Maria Stroeve, Journalist and anchor

Panelists:

Esko Aho, Executive Vice-President, Corporate Relations and Responsibility, Nokia Corporation, Member of Nokia Leadership Team

Donald Almeida, Vice-Chairman, Clients and Markets, PwC

Jean-Philippe Courtois, President, Microsoft International

Bruno Di Leo, Senior Vice-President, IBM Corporation

Andrei Dubovskov, President, MTS Group

Alexander Dyukov, Chairman of the Management Board, Chief Executive Officer, Gazprom Neft JSC

Drew Guff, Managing Director, Siguler Guff & Company LP

Klaus Kleinfeld, Chairman, Chief Executive Officer, Alcoa Inc.

Peter Loescher, President, Chief Executive Officer, Siemens AG

Leonid Melamed, Member of the Board of Directors, Rusnanomedinvest; Chairman of the Board of Directors, Team Drive

Jim Hagemann Snabe, Co-Chief Executive Officer, SAP AG

Viktor Vekselberg, President, Skolkovo Foundation

M. Stroeve:

Let us start our discussion. Some of us have to leave early; some have another meeting coming up; some have a plane to catch; so it is better if we get started earlier to have some extra time.

The subject is so critical and vital that it would be stupid not to discuss it. It is not going to be easy, because we do not have a lot of time, and the subject is immense. Yesterday, we landed at Pulkovo and immediately realized that we desperately need innovation. All the guests who flew in could see that with their own eyes.

Lately, there has been talk at the highest levels about modernizing the country, improving performance, and implementing cutting-edge technologies in Russia. What is more, the Government has earmarked specific funds. The other day, the Ministry of Economic Development of the Russian Federation defined 13 innovation clusters which have to take this innovative leap – this very serious step. Russia's economy is still light on experience; we must have the ability to quickly adopt the best practices of others. I hope we can focus on this in today's discussion.

We hope that Mr. Vekselberg can join in. The Skolkovo Foundation, of which he is President, is a project that accumulates all the most important, most state-of-the-art technologies that exist today, and that attracts major Russian and foreign companies like moths to the flame. I think we have enough experts here to start our conversation without Viktor.

Day after day, we hear talk of open innovation, closed innovation, and breakthrough innovation. It would be good to understand in practical terms what this means and how we can quickly implement various breakthrough innovations in Russia.

I see Bruno Di Leo has been listening closely. Bruno, you can go first. I planned to segue from Skolkovo to you, but since the Skolkovo representatives are not here yet, please get our discussion started.

Intellectual property and open innovation: these are the things without which we cannot imagine a modern company. How are the Russian economy, Russian companies, and foreign companies working on the Russian market dealing with this?

B. Di Leo:

Thank you. Good afternoon. I recognize that we have a lot of players and business leaders here at the table, so I will try to be very brief. First and foremost, there is no single company in the world that is not investing in innovation. It does not matter how much of your resources you locate in research and development, it is clear that there have to be partnerships. Innovation now requires collaboration between the public and private sectors to create an environment that fosters collaboration. Actually, I believe that Skolkovo should be one of these collaborators.

In response to your particular question on intellectual property, it is crucial. At the end of the day, investments have to be translated into value that you can deliver to the marketplace. I am very happy to say that there is considerable emphasis and focus around the world on intellectual property, in particular here in Russia. You can see the case of Skolkovo, and there are many partnerships around. IBM is very active in the development of everything around the protection and creation of intellectual property locally.

Just to close, the information technology industry, which is the one I can represent here together with my colleague from Microsoft, is based on local resources. If you want to drive innovation, you have to create an industry which is local.

M. Stroevea:

One very important challenge is to create mechanisms that would in effect force companies to get on the path of innovation. You are already able to answer this question?

D. Almeida:

I agree with your comment. I am not an expert on Russia, although I have spent a lot of time here. We are also working with Skolkovo. I think one of the keys is foreign direct investment. We say that all the time, but when I say foreign direct investment, I mean money of course, and I mean companies like IBM and Microsoft; but I also

mean the people and talent that come in to germinate the local environment, to create that local talent that you spoke about. I also mean culture, the culture of innovation which exists in parts of Russia and maybe needs to exist even more, bringing in know-how and technology. I think one of the mistakes that many countries are making is that they focus on foreign direct investment as money. Money alone will not create the culture, and will not create innovation.

M. Stroeve:

Mr. Courtois, would you like to add any comments with regard to the human factor? I also have the same question for Mr. Aho.

J. Courtois:

Thank you. I would like to build on Bruno and Donald's arguments. When we think about innovation and people, we think about our role as a global company in every country. First of all, to create IP we have global R&D. We have this in Russia in Skolkovo: building business applications globally. Second is actually enabling IP: being the catalyst for a generation of entrepreneurs to create software companies which are global. For the last 20 years, we have been working with a number of great Russian companies like Kaspersky and ABBYY, and partnering with companies like Yandex on some very important technologies. We are actively involved in a seed fund, where we have been readily enabling a couple of dozen great start-up companies in Russia to actually shine on the cloud globally. The third element, which is really about people and skills, is the way you enable that by connecting and working in partnership between academia, research and universities, and governments. We do believe that in Skolkovo there is a unique opportunity to do such great work by really redefining the rules and the policies for the new Russian innovation of tomorrow. Policy issues on IP are accelerating, so that the idea of a great talent from one of the best universities in Russia can create a start-up company, injecting money from VC funds, and getting that company up and running on the cloud or some other platform to do business globally. That is

what we are doing, and we are excited to see so many great talents in Russia, embodying this new wave of innovation.

M. Stroevea:

Mr. Aho, you mentioned in your remarks that we should not be afraid of a brain drain. Can you explain why?

I know many foreign companies working in Russia which are opening their own training centres here. We are seeing a trend in which our students return after they finish their internships and work abroad for a while at offices of multinational corporations. Is this standard practice? Is this common?

E. Aho:

First of all, I have to say that there has been a lot of innovation in this forum itself. I was here for the first time in 2005, and I suppose that there is nobody else in the room who experienced this forum then. There is one person. We two were there. We have seen huge change. You cannot recognize this event compared with that 2005 experience. Russia has changed. It is very important to recognize that there has been a lot of progress.

I have a couple of hats here: I have a Nokia hat – you referred to that – but I also have a Skolkovo hat, in that I am Chairman of the Industrial Advisory Board. We have tried to collect all the companies who have decided to establish R&D Centres at Skolkovo, and are participating in the 2020 Strategy today. Most of the companies around this table are there. We started to ask them what the difference is between Russia and other markets. I am trying to answer your question by referring to that study because I think it was very interesting. It was about how global high-tech companies look at Russia today. Those managers are working here and meeting all the challenges every single day when doing business here. It is about the ecosystem; it is not about one single or a couple of single things. It is about several dimensions of the ecosystem which have to be in order. Globally, when asked, high-tech companies are saying that customers and consumers are

the number one, then the personal infrastructure, and so on. When we ranked all these criteria in Russia, can you imagine where markets and customers were ranked?

M. Stroeve:

But are you successful? For example, SAP is definitely successful, because your Russian market is growing by leaps and bounds. Considering the specific nature of your business, we can conclude that Russian companies are changing their overall attitude toward this innovative IT component. This is very important. This helps these companies improve their performance.

E. Aho:

There is no doubt that innovation is key. We talk a lot in Europe about the need to get our budgets in order and solve the debt crisis, but the only long-term sustainable way to do that is to enable innovation and, through innovation, growth. I want to add one dimension to that conversation because I think it is key to successful innovation. I believe that too often we confuse innovation with creativity. I define innovation as the size of the creativity, and the size of the great idea, multiplied by the ability to scale in a market, which means bringing the idea to a real market adoption. That is where we have in front of us a whole new era of opportunity for scale. I fundamentally believe that there are enough great ideas around, and the SMEs are often the ones that have the greatest ideas, but they often lack the ability to scale internationally. I think there is a role to play for large companies. We are sitting here with global players around the table. How can we help enable small companies to scale? With the technology of today, you can create platforms that allow a small Finnish company to deliver solutions globally on top of someone else's platform, like the SAP platform. That is what we are doing a lot in enabling this, and I think it is key because innovation is not just about creativity, at the end of the day it is about scaling in the market.

J. Hagemann Snabe:

Let me say something about scale. I cannot ignore the invitation. I do not know if this is why we were put sitting together. We are a fund, as opposed to a big strategic investor. Our job is to find interesting investments in the technology area as well as the general economy – things that did not exist but will exist in the future. A good example of this is that, years ago, we started MTV Russia. It did not exist; it had to exist eventually as part of the landscape. MTV is music television. What is interesting today is the IT sector. So several years ago, we invested in a relatively small company here in Russia and also in the region – in Ukraine and in Belarus – doing software outsourcing. The roots of that company go back to a guy named Hasso Plattner at SAP. A small bunch of guys from the region – some in Moscow, some in St. Petersburg, some in Minsk – showed Hasso what they could do in next generation programming. Hasso took a risk and said, “I am going to give you a piece of our next generation enterprise software to write because I am so impressed.” We recently took that company public on the New York Stock Exchange. It is called EPAM Systems. They had USD 5 million revenue back at that time, with 200 people, by the time they started working for SAP. Today there are almost 8,000 programmers spread across 25 development centres, many of them here in Russia.

A company like that is a company that allows companies like SAP, Microsoft, Oracle, Google, UBS, Barclays, and Coca Cola to scale, because they can grow without adding people to their staff. That adds to the local quality of education. That is a big focus that will have to be paid attention to: educational quality in the technology sector. We can see that there are issues with it, but the private sector has had to step in and provide funding for laboratories. EPAM itself has labs, as do many of the people around the table here. My point is that the company we invested in grew because they got orders from big, global companies, and there are Russian companies that will support smaller Russian technology companies. The faster those small companies can grow, the easier it is for big Russian companies to scale and grow with the help of smaller companies. Those orders are very important. The

greater the extent to which they can support smaller IT businesses in Russia, the better.

M. Stroeva:

Small business really is a very serious issue. The subject of business incubators showed up in the speeches of virtually all representatives of multinational corporations. This is a truly important subject. Klaus, please go ahead.

K. Kleinfeld:

Maria, you started off by asking, what can Russia learn to be more successful on the innovation front? I think it is worthwhile going back to the fundamentals of innovation. I agree with Jim and the others: I think there is a fundamental difference between invention and innovation. I think on the invention front, in advanced technology, Russia is fantastic and has always been fantastic, but on the innovation side, meaning successful commercialization of some technology or idea, you need other elements to make it fly. That, by the way, has always been the case. Our company, Alcoa, was founded by a 22-year-old kid who asked his professor 130 years ago, "What do I have to do to become the wealthiest man on this planet?" The professor said, "Somebody who can figure out how to make this enormously expensive aluminium in an industrial process will be the richest man." He and his sister, who was also a chemical engineer, figured it out. But here is an important point: he then found out that nobody wanted it, he did not have an application. He did not have financing, and he had to go out and find somebody in Pittsburgh to finance it. There is some good news in that.

You need three core elements: a great technical idea – without that it is impossible; financing, an ecosystem to get funds from; and thirdly some commercial sense. In the old days, when industrialization started, this was very often in one hand. In the case of Alcoa it was not one hand, it was three separate individuals. I think that the critical thing in answer to your question on incubators for all kinds of structures is that you have to make sure that you find a structure that has those three elements

and brings them together. If they are separately there, it is not successful. You have to find a way to bring those three things together. Only then can it be successful. Skolkovo can be one of those points where these three things come together. We have done things like business plan competitions, where we encourage people to come up with a business plan and then hold meetings which financiers and commercial people attend. There is a whole host of things - incubators is another one.

M. Stroeva:

Sergey Kravchenko went into hiding as soon as he heard the word “aluminium”.

Aviation and innovation are absolutely inseparable.

I would like to direct a question to Leonid Melamed. You are the man who stood before the media and the business community in various incarnations and managed to turn the company you were responsible for into a success every time. Now, you have a new task. I understand that you will be focused primarily on innovation, specifically innovation on a market that is practically non-existent in Russia.

L. Melamed:

Thank you for your kind words, Maria.

It is true: our company is currently working on an interesting, probably unprecedented joint project with Rusnano and Domain Associates, the largest life sciences venture capital company in the United States. Under this project, Domain Associates and Rusnanomedinvest (a venture capital company created by Rusnano) co-finance promising portfolio companies which create intellectual property rights to new medications and medical equipment in the US. Then, these companies transfer their IP rights, patents, and licences on preferential terms to NovoMedica, a newly created Russian pharmaceutical company under the same partnership, which will produce and sell these cutting-edge medications here.

This project has many positive aspects, one of which is that probably for the first time in Russia's history, we will learn how the venture capital system works on the whole and when applied to the life sciences.

I would like to say a few words about how worthwhile this all is. I was recently astonished by the figures I got from Senior Partner of Domain Associates Brian Dovey, who has served as President and Chairman of the US National Venture Capital Association. In the United States, 12% of all jobs are created by venture capital and portfolio companies. This is a very large number: 12% well-paid, attractive jobs. If we make sure this innovation industry continues to develop, we can create 12% more jobs in Russia that would attract high-level intellectual personnel.

In the United States, in the 10 years from 1996 to 2006, the growth rate of R&D investments was at least twice that of the GDP. America's annual R&D investments amount to USD 100 per capita, and Israel's reach USD 300 per capita. This is money which is only just beginning to flow into Russia. The only way it can turn into the flood crucial to each person in the audience today is if we create an infrastructure in the country that can foster the development of innovative economics. We can talk for ages about the existing elements of this infrastructure. It is very important for us to have projects like Skolkovo, Rusnano, and the Russian Venture Company, which serve as a sort of incubator for building knowledge and shaping the conditions that will push the country as a whole in the direction of innovation.

I must say that the strategy of building innovation clusters is only good in the early stages. Strategically, innovation must move out of the clusters to cover the entire territory. We can already see that to develop portfolio companies that bridge invention and innovation and create patents that become the foundation of future production, we need three factors. The first factor is a powerful domestic consumption market. It is much harder to create Russian companies oriented exclusively toward exporting technologies than those focused directly on domestic consumption. The second factor is patent law. Statistics show that countries with

highly developed patent law invest 2.2% of GDP in R&D, while others invest 0.5%. The third crucial factor is free competition. The majority of funds are invested in those countries with the highest Global Competitiveness Index: Switzerland, Sweden, Singapore, and the US. Suffice to say, 85% of all total R&D investments in Europe, Canada, and the US are invested in the United States. The US has the highest Global Competitiveness Index. Competition is the ability to sell a patent on the open market on the most beneficial terms. These are the conditions in which portfolio companies create 12% of the jobs in the US. Russia has already taken some big, decisive steps in this direction; and if we continue to move along this path, the country will change dramatically.

M. Stroevea:

That is especially true since we are facing the challenge of creating a significant number of new jobs in the nearest future. It is important to note that these have to be higher-quality jobs.

Peter, you also wanted to talk about R&D partnerships. Do you have anything to add to Leonid's remarks?

P. Loescher:

A lot has already been said, but let me emphasize one particular aspect specifically. This is the issue of public procurement in terms of driving innovation, in terms of bringing invention, translation research, rapid prototyping, and inward investment into an innovation and leadership aspect. There is a huge energy agenda for example. I will give you a very practical example which is, in my opinion, currently under-utilized. There was a huge study done in Ekaterinburg which showed that there is actually something in the vicinity of 44% to 79% of energy to be saved. What has happened since? Very little. This is because we do not yet have the incentive structure, the tariff structure, or the framework conditions in place to really drive and mobilize the latest technology in energy efficiency. Again, it is a

combination of how you utilize big contracts in terms not just of driving the latest technology but also of spurring innovation according to the supply base.

Jim has mentioned how we can continue to drive this on the scaling aspect globally. You can actually really drive the whole aspect of how you use public procurement and big projects to continue to drive innovation. This is one example which, in my opinion, is still under-utilized and is a huge opportunity, because the infrastructure needs of these countries are huge. Skolkovo, on the other hand, is a great example of what Esko was referring to in terms of the ecosystem. All of us are there, and this is a huge opportunity for us to continue to attract the best research institutions in the world into Skolkovo, combining small and big companies in terms of the same contracts, and then learning through sharing best practice. This is happening on a day-to-day basis. That is the opportunity that Russia has, and therefore we applaud the fact that Skolkovo is a key focal point of policy, and also the innovation clusters which the current government is pushing forward. All of these are excellent initiatives to continue to drive towards. Basically, you need money. Money is often not the limiting factor, rather having the right talents, the right skills, and the right mind-set.

M. Stroeve:

Jim, would you like to add something?

J. Hagemann Snabe:

I think there is a very important point here. If I look at Europe, Russia has some significant advantages. One is the growing economy. Most countries in Europe are not growing economies right now. Secondly, you have a huge domestic market. A study has shown that, because of the large domestic market, you can get traction and scale close to where you are, and this should be leveraged. I would very much like to emphasize what Peter said: that you accelerate the local adoption of innovation and public sector investments in critical areas like energy or in other sustainability topics, get scale in domestic markets, and then leverage the

partnerships for large companies to go international. I think that is a possible recipe for success.

M. Stroeva:

Andrei Dubovskov has been waiting patiently for a chance to speak.

MTS has long held the top position among Russia's most high-tech companies. In this market, you cannot hold on to your leadership position without technological development.

A. Dubovskov:

My friends, I have not been waiting any longer than the other speakers, so there is no need to single me out.

If you do not mind, I will steer our discussion down a slightly different path, or rather will add a new colour to it. As I entered the hall today, I learned some new information when I read the introduction to the document titled *Innovation in Russia: Strategies for Innovative Development for the Period up to 2020*. One phrase in the introduction caught my attention: it said that the level of innovation and modernization of the Russian economy can only be improved if the state, science, and the business worlds work closely together to involve the public in discussing and finding solutions to the issues of innovative development. Business is still the main component. I think first we must move away from the narrow, single-purpose challenges and initial arguments.

We know full well how much the level of innovation depends on the quality of patent law. We know full well how much the level of innovation depends on the quality of legislation, and so on, and so forth. I believe the fundamentals are very simple. Innovation, social life, healthcare, and the like can only happen if we formulate a powerful response to three main challenges: ease of doing business, social infrastructure, and promotion of talent. I think the current problems with Russia's slow innovative development are rooted in the unaddressed issues from these three

main areas. I think the state's and the business world's main goal is first and foremost to foster their development.

M. Stroevea:

What do you think we need to do to achieve this? And how quickly can this be achieved?

A. Dubovskov:

You know, I look at this issue philosophically. I think whatever post we might hold, each of us has to fulfil our purpose to the best of our abilities. If MTS does its best on the market, becomes a market leader, and gives its employees, clients, and partners access to the highest-quality services, that will go a long way toward what we call innovation.

I would like to add that companies like ours have to pay especially close attention to developing their talent: not only as part of corporate social responsibility, but simply because this is one of the three fundamental principles I mentioned earlier. This is characteristic not only of the Russian Federation, but of the entire world. For example, we have spent years promoting, developing, and sponsoring a particular competition called Telecom Idea. Students of the largest Russian higher education establishments take part in this competition, working on their projects throughout the year and submitting them to an expert council. Those who win are awarded scholarships for their future education. This is our contribution to this common goal.

M. Stroevea:

Esko, do you have something to add?

E. Aho:

I would like to finalize what I was saying about this study done among companies. As I said, in typical high-tech companies globally, customers' access to the market is the most critical thing. When we talked to these global companies operating in

Russia, the key question is the legal environment. It is number one. Access to the market is number six, or even number eight, in Russia. This shows that Russia has its specific requirements as well, and I really hope that in the Skolkovo environment we are not only able to create input into the system but also remove the obstacles which are critical for companies operating here. They are more or less related to the legal system.

M. Stroeve:

Bruno, do you have anything to add on this issue? Global corporations that bring their business to Russia face a serious, often ethical problem: a gap or misinterpretation, or a certain blind spot in the legislation; the lack of clear and well-defined rules. Energy companies kept saying, "We will work with Russia; we want to work with Russia; just give us clear, well-defined rules." It is all right if these rules are strict; it is all right if they internally disagree with them, as long as they are clear and well-defined. They must be understood thoroughly before a company can work on the Russian market or partner with a Russian company, and they must be effective.

B. Di Leo:

First of all, in principle I guess that nobody would even be in this room having this discussion if they did not believe there were a minimum set of conditions to do business in Russia. Can they improve? Of course they can improve, they can improve anywhere in the world. For the particular topic of innovation, I go back to intellectual property. This is incredibly important. At the end of the day, you invest in innovation as you invest in many other areas of business or society, and actually it is not creativity. It has to be transformable into actionable businesses, or services, or products, which you can deliver to society. Intellectual property is the legal environment that will let you do this. Clearly there is more to be done, and I hope it will be done, but again, the fact that we are sitting here discussing this innovation

policy and what it is going to take in Russia is a symptom that we believe that there is progress and that there should be more.

I want to go back to the issue of innovation. It is not just a matter of bright ideas or technology; it is a matter of people and skills. In answer to the particular question of this panel, which is about innovation in Russia, I think it is our responsibility as global companies investing in Russia, as well as the Russian Government partnering with us and local enterprises, to build skills locally in the country, especially in the IT industry. The IT industry is an industry whose primary raw material is human capital. If we want to develop and sustain a vibrant information technology industry in Russia, we have to enable the people, the local enterprises, not only to build software to export to the world, but to have the capability to develop new ideas.

M. Stroeve:

Jean, you wanted to say something, but first, I want to add one more comment. I remember very clearly that in 2006–2007, before the crisis, representatives of every IT company working on the Russian market were saying that the market was growing very fast, and could grow even faster, but that they had a shortage of human resources.

J. Courtois:

I am in full agreement with Bruno. As a matter of fact, as a company we have been and we are working with more than 350,000 engineers across Russia, developing and deploying solutions for enterprise, the public sector, and small businesses. All those jobs have been created and, interestingly enough, there was a study which was just published yesterday by the Information Institute in Russia on Russia's e-skills readiness. The good news is, Russia is making progress. When you look at the web readiness index, Russia moved from 77th position to 56th. That is a positive move, yet there is much more to be done. If you take the perspective of Europe, there was actually another report issued this week by the Vice President of

the EU Commission, Neelie Kroes. She is actively working on digital skills in Europe, because by 2015, not just in Europe but in Russia, 90% of the jobs an economy should have will require digital skills. This means that it is just as important as basic literacy. It means that this is a very big deal for Russia.

I had a great discussion with a couple of ministers this week here in St. Petersburg, discussing the appetite of the Russian Government to enable a deeper learning process, to enable much more connectivity between students, the parents, and the institutions, because there is a lot of talent in this country. Russia is among the top three or four countries in the world in terms of software development talent. That is why Microsoft is also doing a lot of work, as we talked about. We have dozens of stories like that of fantastic companies. We want to enable that, and that is why, as a company, we have actually invested for the last five years, and made a lot of contributions to community centres. Through this initiative, we have reached out and trained 700,000 people in basic IT language so that they can actually deal with the devices and with information, working for any kind of industry, not just IT. That is creating a lot of additional productivity in the economy, so this is a big deal. We are in the game.

M. Stroeveva:

One second; I want Alexander to say a few words. First of all, this is one of the key industries; and secondly, it especially requires an innovative approach.

A. Dyukov:

I do not know if my remarks will interest anyone, since I represent a traditional industry.

M. Stroeveva:

It is traditional, but very important, to say the least, putting all false modesty aside.

A. Dyukov:

I have a few general remarks. Existing infrastructure, easy-to-understand rules, and protection of intellectual property are all very important issues related to innovation. How do we figure out what is primary and what is secondary? I see this issue from my own vantage point. To me, demand is probably the primary factor.

Predisposition to innovative behaviour may not be entirely absent in us Russians, but it is certainly not present in sufficient quantities. Russia has changed, and so have we; but innovative behaviour is still not part of our culture. It would be good to see innovation take a more central place. What is the reason for this? Leonid hit the nail on the head when he mentioned competition. I believe that the main reason is the absence of a competitive atmosphere and competition. Competition is what drives the demand for innovation. Historically, we lacked competition: instead, we had a planned economy. Some people liked scientific endeavours and research; they liked discovering things and finding interesting solutions. However, these people primarily ended up in the theoretical rather than applied sciences, because theoretical sciences were much more prestigious. Our competitive atmosphere is currently being shaped, but it is far from perfect. As long as companies can keep growing by expanding on the resources established in the Soviet era, as long as they can keep growing by performing mergers and utilizing administrative resources, they will not see innovation as a priority, and as a result, there will be no demand from the business community. I do think demand for business investments is the primary issue. I realize that business also creates supply, but developing competition is the state's responsibility. I believe this hampers our progress, and we can improve on this.

I am talking from the perspective of an oil company, which is a traditional type of business. We work under certain strict regulatory limitations that do nothing to stimulate innovative endeavours in the Russian Federation. Technical and normative regulations governing the development, construction, and operations of facilities working within the oil industry, such as oil refineries and petrochemical plants, are prescriptive rather than goal-setting. What do I mean by prescriptive? When working on any investment project, investors are forced to work within the

strict limits of existing regulations and guidelines. The thickness of the wall, the size of the stop valve – all these things have been defined and must be followed. How were these regulations developed? The earliest factories built in the Soviet Union were supplied under a lend–lease or something similar. These were Western technologies and Western equipment. The procedure for creating the regulatory technical base governing approaches to construction and operations was shaped at that time. Instructions and documents sent to us became the foundation of regulations and guidelines. Technologies, materials, and equipment changed over time, but the regulations and guidelines of the 1930s–1940s were passed on from document to document. The human factor played a part as well. Regulations were tightened, and as a result, our current CAPEX capital expenditure index of construction of an oil refinery, terminal, or other facility is higher than the CAPEX of companies building similar facilities in Europe, despite the higher cost of European labour. The problem is that rather than focusing on reaching goals, the system is prescriptive, forcing certain limitations on all our designers and material and equipment production companies. There is no incentive to find innovative solutions.

M. Stroeva:

What is the solution?

A. Dyukov:

The solution is to promote competition. That is the government's job.

M. Stroeva:

Can the oil industry lobby for these interests?

A. Dyukov:

When it comes to promoting competition, the Federal Antimonopoly Service is doing a great job. As far as implementing new approaches to technology regulation goes, we are working on this very closely. We began this work two and a half years ago

when we created a working group. That working group was headed by Gazprom Neft. We are currently trying to change our approach: we are moving away from the prescriptive approach and toward a goal-setting one. We have created a draft of new federal regulations and guidelines that will allow companies to move away from old methods. Right now, the draft is being debated, and we hope that it will be approved this year.

M. Stroeva:

Please wait one second, Klaus. Sergey, do you have something to add?

S. Kravchenko:

I am Sergey Kravchenko from Boeing.

You know, Maria, I find the remarks of my esteemed colleagues fascinating; maybe with the exception of Klaus...

M. Stroeva:

You find his remarks boring?

S. Kravchenko:

No, with the exception of Klaus – you did not let me finish – who introduced a new idea. I feel like we have been going over the same things 20 times in the last five years.

M. Stroeva:

Surprise us!

S. Kravchenko:

Everyone complains that we have no innovations or investments because we have no infrastructure. Mr. Surkov called Russia's oil and gas companies 'low-tech'. I have no idea how you can call, say, a cutting-edge oil company 'low-tech'. I feel like

this is all getting boring because we do not have any new solutions: we get together and listen to the same things over and over.

Klaus was spot-on in his remarks today. We have to work in three directions. We must keep the scientific and technological ideas or people who can come up with these ideas from leaving the country. If they leave, we have to get them back; we have to ask them to come back, regardless of what kind of passports they hold; they have to come back. There needs to be money. Russia has money. And we need orders. Orders may come from Gazprom, but if Gazprom is not interested, then they can come from Boeing, Microsoft, or Intel. I think we need to talk about this.

Why is the Russian Government not doing the same thing Rajiv Gandhi did 25–30 years ago, when he personally sold India, in the best sense of the word, to Jack Welch? India was not a high-tech country, but it was a country that wanted to be part of the global elite. It became the high-tech leader it is today thanks to Rajiv Gandhi, who was driven by the absence of oil, gas, and metal deposits to do something else: to create an IT outsourcing boom. This is with all due respect to Drew, whom I admire greatly, and I am happy he made money on EPAM. We have Luxoft, which works with hundreds of Russian programmers. Russia can no longer go down this road, because India will undoubtedly remain the IT outsourcing leader for years to come. Russia can and must become a leader in the sphere of engineering and scientific outsourcing, because we still have a rich scientific tradition: thank goodness the people who can teach engineers have not left or died out yet.

Boeing, Microsoft, and Alcoa will come to us and say, “The world is experiencing a shortage of engineers and scientists. Would you consider letting us use your intellectual product development resources?” Some short-sighted people might think that this threatens Russia’s national security. I believe this helps us address the pressing issue of modernization and innovation, because by building his research and development laboratory in Russia and creating 150 jobs, Klaus will help our country retain its aluminium and metallurgy knowledge that will then go on to benefit the entire world. This is what we will do at Boeing.

The reason I am so confident and so emotional, Maria, is because you and I have talked about this many times. It is too bad that we are not learning from the best examples. Intel and Boeing have done just that. We work harder on our engineering projects in Russia than we do anywhere else in the world. Our largest engineering centre outside the United States is located here, along with our largest scientific centre. We have designed a huge number of major Boeing 787 Dreamliner sections with the help of Russian engineers. Those same Russian engineers designed, or helped design, Mikhail Pogosyan's Sukhoi Superjet 100.

M. Stroeva:

It is too bad that he is not here today. We have a lot of questions about SSJ.

S. Kravchenko:

I would like to tell you a story about India: it has a direct connection to what we are talking about.

M. Stroeva:

Will it take long?

S. Kravchenko:

No, only two minutes. I took my first trip to Bangalore in the 1990s, when things were only beginning. In the 2000s, we took Messrs Reiman, Putin, and Gref to India. Nearly all IT centres in Bangalore worked for American and European companies. Today, those same people are building India's own banking system, India's own healthcare system, and India's own education system. They did not buy their expertise: in the 21st century, no one will sell you technologies and innovations for any amount of money. They earned their expertise while working on specific projects brought to India by Western companies. They earned their expertise, and now they are changing their economy and benefiting hundreds of millions of Indians.

We have to do the same thing, and if we do not, then other ambitious countries which shall remain nameless will beat us to it.

Thank you.

M. Stroeva:

Thank you.

Lately, nearly all the major corporations working in Russia that require intellectual, especially engineering, personnel are striving to work with higher education establishments and technical centres, which have gone through a very difficult decade. However, it is true that Western investors do meet a certain level of resistance in the regions. These are issues of mentality, which, as I understand, we are gradually overcoming.

K. Kleinfeld:

Can I just say three things? If you believe that it is technology, financing, and basically commercialization, try looking at it as a non-Russian but having a lot of people here and having come here often. On technology, I would give Russia a lot of credit and, as was said before, Alexander, I think you are too self-critical. On technology, I would say that there is a great tradition in Russia, and great technological education. We have to make sure that it continues on that level, because currently it has gone down. Technology-wise, I think Russia is really good. We have to make sure that technology transfer works: transfer from the universities to the commercial sector. That is one thing.

The second thing is on the financial side: the infrastructure is not good. We need to have start-up financing and we need to have more venture capital money there. The example of what Drew has done here is a great example. Commercialization, in my view, is one of the biggest unaddressed gaps. That is one of the reasons why companies are struggling to turn inventions into innovations. There, we need education. We need education and we need an understanding, not only of the Russian market, but also of global markets, because today you need to have a

certain scale to be successful. If you cannot commercialize something on a successful scale you will be wiped out the moment the international competition comes in. It is extremely important to have education.

These three components are there, and we have to bring these three things together in various forms – be it an incubator, be it Skolkovo, whatever. There is one element that is not discussed enough in Russia in my view. If we look at the United States, their statistics clearly show that the success factor in the United States for innovation is immigration, and the United States needs immigration less than Russia needs it, because Russia has a shrinking population. I understand that, as of last year, it has been growing a little bit, but for Russia, the problem is to stop migration and then to think about intelligent immigration. It is an amazing thing how many people who have been educated here in Russia have successfully innovated on a global scale. There is a lot of potential here. If we can keep more of this in the country and probably bring some back, I would be very optimistic.

L. Melamed:

May I?

M. Stroevea:

Yes, of course, Leonid.

L. Melamed:

These are all very interesting and important remarks. We are looking at the issue from different perspectives. I agree with Sergey and Klaus, as well as many other panelists, that at this stage, the fact that major global corporations are building R&D centres in Russia is a crucial component, but far from the only one, in the development of Russia's innovation industry. This gives us specialist jobs, high-paying and highly intellectual jobs, and many other benefits. The list is long, and I am sure Maria will cut me off if I begin to list everything.

M. Stroevea:

Yes, because we have very little time and plenty of people who want to speak.

L. Melamed:

Maria, another very important thing we must all work out is how to define the apex of innovation. The apex of innovation is the patent, preferably with international rights. The location of the taxpayer who owns this patent is crucial. If Russia keeps churning out patents that belong to non-Russian companies or subsidiaries of non-Russian companies, then a significant part of the motivation to create an innovative economy will be centred in the countries that collect taxes from these patents. Why is Apple – which does not produce mobile phones, but rather produces patents and sells mobile phones – so highly valued? It is because the profits accumulate in the United States, in the accounts of a legal entity named Apple Inc. As we bring R&D orders into the country, it is crucial that we do not forget to open thousands of Russian companies that will create patents. They could register them here on preferential tax terms, then sell them in Russia first, and then abroad. And the Government could collect taxes on their profits.

M. Stroevea:

We are beginning to get notes with questions written on them. This is great: it is a sign that the audience is captivated by our discussion. If you will forgive me, let us read the questions if we have time at the end.

I see that not all our speakers have delivered their remarks yet. We have many speakers and not enough time. I am terribly sorry. We will try to answer these questions.

I have a question for the right side of the table: Bruno, Andrei, do you have anything to add? We have heard some passionate remarks. You can speak in unison if you like.

A. Dubovskov:

Bruno and I have had the same schedule all day: in the morning, we were supposed to have a meeting together; now, we are sitting next to each other and getting questions together.

M. Stroeva:

A duet, a tandem: these are fashionable terms right now.

A. Dubovskov:

I feel like MTS and IBM are becoming like sister companies.

I have one thing to add. I keep trying to ground our discussion, but I am not sure to what extent I have succeeded.

M. Stroeva:

You want to talk in practical terms.

A. Dubovskov:

It is not so much that I want to talk in practical terms, but that I want to focus on the most fundamental issues. Leonid mentioned that we keep discussing the same topic. We keep trying to attack it and promote it from different sides. One person gives advice based on his own practices and previous experience; another defines a set of basic conditions; yet another believes the key issue is patents and in the jurisdiction of various legal entities, and so on. I agree with all of you on the main issues. I have been sitting here and not raising my hand because I have no objections. I keep trying to say one thing: to achieve the results we are talking about, we have to fulfil our purpose on this Earth to the best of our abilities. We are gathered here, and the media might be listening; the Government and various industry lobbies might be listening; the people in charge of promoting innovation based on this programme might be listening. Our goal, here and now, is to create the impetus, share information, and offer our interpretation of the challenges facing

us as representatives of the business world. These seeds must find fertile soil; we must be heard by the decision-takers.

That is how I would sum up our discussion. This is nothing new. I am fully aware that there is nothing new in saying for the twentieth time that everything depends on infrastructure, on the standard of living, on doing business, and on the right attitude toward finding and supporting talent. But this is what lies at the heart of everything. We should not be afraid of sounding unoriginal; we should be afraid of sounding abstract rather than talking about the fundamentals.

M. Stroevea:

We should be afraid of just talking, without actually doing anything.

The growth point is in holdings, in a real sector of the economy, rather than in Skolkovo. Alexander talked about this earlier. This is something any company working in a real sector of the economy faces. This is reality.

A. Dubovskov:

We need demand, but we also need supply. I think we also need Skolkovo, and other facilities like it.

This is not quite what I was talking about. I was talking about the formation of a new culture, and this process will undoubtedly take time.

M. Stroevea:

Yes, but we can only get to the growth point as a result of these changes.

Yes, Bruno, please feel free to speak.

B. Di Leo:

Elaborating on what Klaus said, technology is important, but by itself does not make any sense. The business of innovation is not creating ideas to sell ideas to somebody else in the world, because that is not going to make Russia more competitive. That is one side of the equation. The other side is what we have all

insisted on: local skills and local talent. You keep it, you develop the talent, and you have to create an environment in which the country is building talent. The third point is what you call commercialization. I would say the proof point of innovation in a country is whether a country is more competitive: are the local enterprises more competitive? Is the country in a world position when it comes to trade, economic development, and wealth creation? That is the ultimate proof point of innovation in an economy: are the local enterprises more competitive? That forces a discussion, which shows that innovation is not only a matter of technology, it is a matter of ways of doing business. Is the environment, or are the conditions for doing business in the country being innovated in a way that everything can be more competitive? There is an additional discussion around innovation that goes beyond technology, which is about how we cooperate as enterprises, globally and locally, to create business conditions that will make the whole thing more competitive.

M. Stroeve:

So Donald would like to comment, and also Jean-Philippe. Who is going to speak first? Please, go ahead.

D. Almeida:

I agree with everything that has been said, some of which was a little controversial. When Klaus said you have to get the people that are talented to stay, and you have to get people from outside Russia to come in to work, I agree with him: that is the only way you can create a sustainable culture of innovation. I do also agree with Klaus that some people here have been overly critical, because I think Russia has made dramatic progress in the last three to five years. Everybody has talked about it, and it is a pyramid: it becomes less important as you get to the top, but the bottom of this personal ecosystem that everybody has referred to is education, healthcare – what makes people want to live here? The second is the business ecosystem, and that is rule of law and IP, etc. At the top of the pyramid are the

enablers and accelerators. I personally believe that it is the bottom and middle of the pyramid that will make Russia successful.

M. Stroeva:

Jean-Philippe, please.

J. Courtois:

I think we all agree in terms of technical invention, the global marketplace and people skills. Microsoft will make an announcement a few minutes after this event, which is that next year, in one year exactly, in St. Petersburg, we will be organizing Imagine Cup, which is the equivalent of the football World Cup for software development. It is the biggest technology event on the planet. We have 350,000 students participating across 200 nations, and we have decided to hold the final of that event in St. Petersburg to set the stage. We will have a lot of companies, people like Drew and business incubators, coming to take the best of the best from Russia and other countries, to create this new economy that Russia is supposed to also be creating, from concepts to reality. Welcome to Russia, and come back in a year. Thanks.

D. Guff:

I will jump in and say that we will definitely have our programmers taking part. There is a real home-field advantage in St. Petersburg, because, as you know, some of the best IT programmers come from this city. I would not be surprised if the home team wins. I just want to take a few steps back and say that the push for the innovation economy, and the push for technology, is really only a few years old. Remember, Skolkovo was just a concept a few years ago, and when it came out a lot of people derided it. A lot of people made fun of it.

Multiple seminars and multiple sessions were held on whether this was real – could it even be pulled off? Now we are sitting here, and we have major global corporations following the leads of people who were even riskier pioneers. In that

sense, you did have the Boeings, who came here early and put their first-level work outside of the United States for the first time ever. Intel did the same thing. Now, you have got real critical mass. It is only a few years later, and that, to me, is a surprise.

Two years ago, the President of Russia had a meeting with the venture capital community. It was the very first trip by VCs from Silicon Valley. They went out to his residence and they talked to the President. There were two major messages that came out of that. One is that things take time, because they just do. You cannot create an ecosystem overnight. You cannot force the creation of an ecosystem. It has to be built through a lot of other elements that come together. The second is that IT is your easiest victory in Russia. Other technologies are much harder, they require a more commercialized version of technology that does not exist yet. But in IT, you can jump up the learning and the next level of commercialization very quickly. Now, two of the three largest internet companies in Europe are Russian. These are three flag carrier national champions for IT that are public companies, and probably the IT sector will continue to be a driver for innovation. You are going to build the ecosystem around the biggest part of it, which is IT. To the issue raised by Alexander, I also have to add one more thing. He is not unusual.

M. Stroeva:

We have little time left, please be brief.

D. Guff:

He is not alone in the feeling that entrepreneurship needs to have more respect and more acceptability. We even see that in the United States economy: feeling towards entrepreneurs and employers is probably at its most negative point in about 20 or 30 years. They are on different levels completely, but how entrepreneurs and innovators are viewed by society at large is an issue in Russia, as it is now in other countries.

M. Stroeve:

This education probably has to happen in stages. A few years ago, the best specialists and market players would gather at these sessions and argue over, let us say, the IT market's immense potential: when will it take off; when will it kick into gear? We can agree that this qualitative leap has already taken place. What do you think you can tell us about the timing of the innovation breakthrough that is being discussed in the highest echelons? Donald gave us the figures: the country needs three to five years.

Would the specialists present here agree with this assessment?

Jim?

J. Hagemann Snabe:

I would also like to add to this positive feeling. I love the comparison with India by the way. We have been in India for many years, but we should not forget that the reason we first went to India was the price, not the talent. Then, over the years, the Indians who were well educated in the United States began to come back, and today we are in India for the talent. The comparison is interesting, because when we now invest heavily in research and development in Russia, it is because of the talent from day one. The amount of very strong engineers and well-educated mathematicians that you have is an asset, and I believe that this will carry you at a much higher pace than any other country we have seen. That is why I am pretty optimistic. Yes, you can argue about infrastructure, but compared to India this is heaven! I would never be negative. There is always opportunity for improvement; you asked how long it takes. I believe this revolution, while it is a cultural change, will happen much faster. If I look at the kind of interactions we have with large companies like Gazprom, for instance, the learning opportunity, the willingness to do new things with new technologies is amazing, and the skill is here to make it happen at a much higher pace. Do not set a plan that takes too long. It is a fast plan, and I think we are all here because we believe in that. In five years I think you will be a major player if you do it right.

K. Kleinfeld:

It was three years ago when a team of Russian high-level delegates came to Boston one night on a dark, lonely evening and wandered around talking about innovation, and here we are. Again, I am more optimistic. I also think life did not start just four years ago. When you look at companies that have been around for almost 200 years and have been here, Russia has played an enormous role in the development of Europe for a long time, and it is reconnecting to that, but there are important elements missing. If we do not add them we will fall short.

M. Stroeva:

On this happy note, I have to tell you that we are out of time. I have question from the audience. 'If the panelists were appointed to the Board of Directors of a monopoly, what would they do?'

I will answer for everyone, because we do not have the time to hear each panelist. I think rather than sit in this stuffy room and discuss pressing economic issues, we would be suntanning on the beach.

Thank you all very much, and I would like to thank MTS for sponsoring the session. Thank you all for coming.