What are the peculiarities of the innovation system in Australia?
The innovation systems in Australia are largely based on successful programs from the US and the UK. Tried and tested mechanisms such as R&D Tax credits, cooperative research centers and investment funds for new technology form the backbone of the Australian innovation system.

In formulating its innovation policies the government has been mindful of Australia’s distinct characteristics. Its population is focused in major coastal cities with a rural population spread over large distances. Historically Australia has been politically aligned with the UK and to a lesser extent, the US. It is now forging strong economic ties with its Asian neighbors whose demand for natural resources continues to grow. Australia is known for its strong minerals and petroleum industries which are both technologically advanced and highly innovative.

Environmental issues such as climate change, food security, water and marine management are increasingly high priorities for Australian innovation policy. The environment also provides unique opportunities. For example, vast unpopulated areas which are relatively free of radio-interference are suitable for innovative space research. The government is supporting the bid to host the world’s biggest radio telescope - the Square Kilometer Array (SKA) - on the western coast of Australia.

What are the latest changes to innovation policy in your country?
The Australian Government recently released a policy framework, called “Powering Ideas”, to guide the development of Australia’s innovation system over the next ten years. The policies cover a wide range of funded initiatives in both the government and business sectors. As a result of these changes Australia now has the most attractive R&D tax environment in the world, according to a recent KPMG report. The government has also committed itself to building an ambitious high speed fibre network that will provide 93% of the population with access speeds of up to 1Gbit/sec. This project, which will be the biggest single infrastructure project ever undertaken in Australia, is estimated to cost AUD $43B (USD $39B) and scheduled to take 8 years.

The government looked at all the innovations that happen in Australia and tried to define, first of all, the number of priorities in terms of what innovations should focus on, and, of course, where the government funding should be focused in terms of innovation. During this process they considered all the research and development innovation ideas in other countries, particularly in the UK and the US but also looked at specific environmental, geographic and economic factors that affect Australia in setting those priorities.

So, they looked at a number of different areas and one of the most significant things that came out of this Review is R&D tax credit, which is a mechanism that my company has used quite effectively over the years. A company receives a tax credit in terms of real dollar for R&D activities. For a small R&D company like DDD this has been very effective because let’s say if we spend a million dollars on research, then we get 300000 dollars back as a tax credit. The government encourages even small companies invest in research and innovation.

Also, there is an initiative called Clean Business Australia and Green Car Innovation Fund. The first is targeted at companies that have innovations that can save energy, waste, water. The latter invests money in environmentally friendly car technologies. The innovation framework also included funding support to these kind of sectors.

In my opinion the proposed innovation policy framework along with the substantial investments in infrastructure is a significant and positive step forward for innovation in Australia. These initiatives, if successfully implemented, will not only bolster the traditional government R&D organizations but also allow innovative small enterprises to emerge. There is recognition within Australia that the economy is too heavily dependent on the mining sector and initiatives such as the National Broadband Network are a decisive effort to diversify the base of the economy.

Overall, the recent innovation review has been very thorough. There are two areas of policy that may benefit from more investigation: innovation clusters and patent system reform. Innovation clusters are globally recognized as productive environments to incubate and foster new technology. Increasingly policy makers are looking at means to encourage clusters to emerge. For example, South Korea is specifically targeting clusters, in the form of science parks, as a central focus of their innovation policy.

The Australian government perhaps has not focused as much on the concept of innovation clustering and putting new technology in the same place. I think what they are doing is trying to improve individual firms abilities to communicate with
each other. There is an initiative they call Enterprise Connect which is about allowing individual firms to work together at elaborating business and academic networks and also bring together technology companies with universities and other technological institutes so that they can share information. Perhaps, what has not happened as much in Australia and happened in countries like South Korea, China and Japan is that particular geographic areas there were assigned to innovation parks or regions where technology companies can base operations. And in these areas companies can have tax breaks or other incentives to move to that area. I think the Australian government is not so much focused on this area but more look at the communication side of cluster in enabling companies to work together by forming networks, virtual networks rather than physically locating businesses next to each other.

The Australian innovation framework does include a commitment to review the patent system and Australia is already involved in assessing the Peer-to-patent process along with other countries such as the US, UK and Japan. Patents have been described as the currency of innovation and it is important to make sure the system is efficient, and effective for small to medium sized enterprises as well as multi-national companies.

What do you think about innovation policy in Russia?

Russia is similar to Australia in respect to the predominance of large companies focused on mining and heavy industry with less focus on high tech and consumer goods. Like Australia, Russian government R&D expenditure is much larger than private R&D investment. Generating a vibrant environment for small innovative companies through intellectual property protection and favorable tax policies are some of the challenges that both Russia and Australia face. Increasingly large venture capitalists are recognizing the significant potential for innovation and growth in Russia and investing in its technology companies.

How does Australian government stimulate traditional resource industries so that they innovate?

There certainly are some parallels between Russia and Australia in terms of dominance of mining technology companies and heavy industries. Obviously, there are a lot of differences as well. But I think there are some parallels. These R&D spending are made more by the government than by the private sector in both countries. The resource industry in Australia is actually very technologically advanced. But as the resources such as, for example, mining stocks in a country continue to be exploited you need new technology to access certain minerals economically viable. A good example is deep oil drilling that happen in the Gulf of Mexico. Now it is more difficult to extract these resources from the environment and we have to use technology. So, innovation is a part of companies’ development here in Australia.

In terms of government funding the primary mechanism is probably the R&D tax concession. Large companies that invests in development of new technologies can claim against this fund and get tax credits for what they do in R&D. There is a number of ways that large mining companies can access funds and they are encouraged to innovative work in terms of the way they operate.

What researches and developments may assure a technological breakthrough in the nearest future? Do you think that such a breakthrough will happen?

The ever increasing computational power of display devices enables more sophisticated video processing algorithms. This evolution is driving the development of a new generation of smart analysis algorithms using techniques like motion analysis and machine learning. This industry is characterized by a steady evolution that will inevitably lead to breakthroughs in the way we perceive and process visual information.

What ideas expressed at the Forum you think are the most important?

The first one was the concept of diversity versus specialization. In the business world, the mantra is to focus on your core business. You have to make sure you do one thing very well. Once you have done it, you may diversify. At the forum we have heard two different viewpoints: one indicating that diversity is the key to a strong economy while other people pointed at building confidence by focusing on areas of natural strength.

The second interesting idea was about copying versus leapfrogging. Should you take advice from Israel? Should you look at Finnish system? What strikes me is the evolution of technology innovation in the Asian region. As Japan, Korea and China developed they started by absorbing overseas technologies and building strong foundations before becoming more innovative. The discussion surrounding copying versus leapfrogging and doing something new is interesting. I think you do have, to some extent, copy good ideas from other people before moving beyond that.

The third area of interest related to infrastructure and modernisation. It is important that the infrastructure is closely looked at. I have mentioned before that in terms of infrastructure Australia is constructing a national broad band network for a very high speed fibre communication. Networks are the equivalent of roads for a modern digital economy and I think this is an important challenge for Russia, given its size.

A fast internet backbone is a key thing for all nations looking at innovation these days. Not only new technologies but existing technology supply chains in a business process need fast exchange of information. So, having a solid backbone for communication is essential.

I also believe that intellectual property protection is a vital part of technology infrastructure. That was recurring theme at the Forum and is clearly an important area for modernisation. The Forum provided me with a fascinating insight into the challenges and opportunities that Russia faces.