

Microsoft
Innovation Day
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Transcript of Keynote Speakers

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President, Microsoft International

I. Preamble

Prime Minister, Ministers, Members of the European Commission, Members of the Parliament, colleagues from the industry and media, ladies and gentlemen, good afternoon. A long list. I am delighted to be with you all for the third annual Innovation Day in Brussels. I am very glad to focus on one topic, which I believe is of high interest for Europe and for Microsoft: innovation. Innovation is a growth gene for the economy, competitiveness and sustainable development.

II. Creating Partnerships Across Europe

As a company, we are investing heavily in research and development in Europe, more than \$0.5 billion per year if we include all of our research labs, the 15 development innovation centres across Europe that we have created in the north, south, east and west parts of Europe over the last 10-15 years.

I hope you will get a sense of the partnership we have been creating across Europe. This is not just about the investment, the money, the finance we have put on the table. It is about the co-existence of academia, of small businesses and companies, fuelling more innovation on top of the software.

Today, you all have a good opportunity to see that in action, the reality. It is more than words; it is going upstairs and touching the imagination table. We explained that to the Prime Minister, moving pictures around, for example, checking crime scenes with software, or innovating for retail, manufacturing, and government. All of that is part of the experience you can have, and I hope you really enjoy it.

III. The Transformative Power of Computing

A very tangible way of talking about innovation investment is really the fact that it stems from three things. The first is the deep belief we have in the transformative power of computing for business and for society. The second strong point is a deep commitment in pushing state of the art technology, in particular at the intersection of science and software; life science is an example. The

third point is that this commitment is all about deploying technology through, again, a vast network of partnerships, in particular with small and medium size businesses that are developing innovation on top of that.

I would just like to take a couple of minutes to reflect and show a very concrete example on the third point, the partnership network. I would like to talk about the small and medium businesses. There are more than 20 million small and medium businesses across Europe. They are the core of economic growth and job creation in Europe, have been for many years and will be for the years ahead.

IV. IP Venture

When we think about that as a company, we think about it in different ways. First, how can enable the economic development and growth of innovative companies using intellectual property? To do that, we have been creating a mechanism called IP Venture, which is a way for us to engage with VCs, the financial institutions, start-up companies, entrepreneurs and businesses and actually transfer some of the inventions patents we have created in our labs in Europe to those companies.

We launched this initiative 15 months ago. Today we have done 10 transactions, including six in Europe. One of them resulted in equity in some of those companies, but that is not the end goal. The goal is to enable more innovation and acceleration in the growth of those start-up companies in Europe.

When we do that we often partner government agencies, and I must say that we have had some very good partnerships over the last 12 months – because this is still a very new programme – in Ireland, in Denmark, in Finland, and we certainly see a strong commitment from those countries, Finland in particular, to sit down at the table and get connected to the most innovative start-up and software companies in the country. That has created a lot of momentum.

V. More Entrepreneurship

Let me talk briefly about two other initiatives happening in Europe at the country level. In Germany, there is a nationwide initiative pushing for more entrepreneurship. It is a big initiative, which we call a founder initiative, and Microsoft is part of that. It means that at the state level, the lender level, today 11 out of the 16 lenders, and very soon the rest, we have a very strong coupling of our technology innovation standards, sales and marketing efforts, and mentoring of new businesses and new managers creating those companies, and we already have a few thousand companies that have benefited from this partnership.

VI. The ID Programme

Moving to the west of France, there is an initiative created with 20 VCs, the 20 top European VCs, showing and selecting the 25 top start-up companies in France. Adding us to the table as well, we can expose them to our product development and research labs and help them sell and market their products globally. We can help them scale up more rapidly. This is the ID Programme. The good thing is after less than a year, all those companies have already passed the first €1 million bar, which is a critical hurdle for a small start-up. They are going much farther.

We have seen three of those companies getting second-stage funding from VCs. Between €5 million and €20 million is a lot of money for a start-up company. This has been made possible because of the stimulation and fertilisation between global companies like us, who have a global presence and local start-ups with great technology. Those are three very specific examples of the way this technology can work.

VII. Business Development: Win-Win

Clearly, when we think about that, we think about concrete success stories and today you can see a number of companies that have done a great job of clearly developing their business. As a company, we have basically been drawing partners. 95% of our sales revenue comes through partners. In Europe, we are working day after day with more than 150,000 small and mid-sized ICT companies. They represent more than 3 million jobs. That is a real part of the economy, and this is why we are believers in enabling the development of such companies. It is a win-win situation.

It is my pleasure to present someone who embodies one of these companies. This is the CEO of Robosoft, Vincent Dupourqué. He will share his vision of partnership and innovation between companies like Microsoft, development and support, and the way it creates innovation in robotics, which is an important development to have in many areas of the business and society.

Partnership and Innovation

Vincent Dupourqué

CEO, Robosoft

I. Preamble

When I was invited to speak at this innovation day, I wondered what I could talk about. Did I have something to contribute on innovation, to such a great audience? After starting to think, I realised that since its creation in 1985, Robosoft is in a perpetual innovation process, trying not only to transform robotic concepts into useful objects for consumers, but also to create profitable market opportunities.

II. Simple Ideas for Complex Problems

We are now very close to this objective and this is the innovation story I propose to share with you today. When we started the company in the mid Eighties manufacturing robots already existed. Our first idea was to consider that the service sector would also have automated and manufactured these in the Sixties but we very quickly had to admit that only a few service robots existed and they were only mock-ups and prototypes. Without robots to run our software, we had to start making our own robots, at least to demonstrate all their capabilities and potential. This is the first lesson I learned concerning innovation: a simple idea, sometimes called a vision, may hide very complex problems.

III. Translating Need to Market Opportunity

We had to face another issue in the early Nineties. In Europe innovation and robots were considered as responsible for unemployment and many other social issues. We were job killers and, without any political support, roboticists had to limit their ambition to research and one-off solutions in sectors where robots were fully justified by performing tasks and services for people. Thus, in the Nineties we developed several hundred very specific advanced robotics solutions in various different spheres, such as cleaning, security or military applications. Each of them very nicely fitted a real need.

Then we learned the second lesson for innovation: a vision must be translated into a need but a need does not necessarily mean a straightforward market opportunity.

IV. Supporting the Vision Over Time

In developing this very specific robotic solution, we discovered that software for robots was very different from software for computers. To cut a long story short, there are two major differences: time management and the robustness of software. Imagine when your computer crashes, you have a blue screen and you can drink a cup of coffee. When the software of a robot crashes, it may stop – this is the best case – or it may go crazy and hit walls and injure people. This is the second big difference, especially how far these two simple considerations can make things difficult. We had to abandon our notion that the robot was simply a computer with wheels and motors. Developing robots for software led us to something else, a new type of autonomous and mobile object, which I call a “robuter.” This was my first lesson in innovation: you may need to work to make the vision clear and to support it over time.

So, fifteen years later, what is a “robuter”? Today the robuter aims to become the computer service robotics, but what type of robot? I am not talking about science fiction robots or naughty robots killing people, or androids, robots which look like human beings, or even a robotic pet to replace your dog. These types of robots were never part of our vision, even less so today. Robuters are here to help us and not to replace us. We have always pursued application in markets where robuters could offer a real service to people: transport, cleaning, security and entertainment.

V. Patience and Flexibility

This was my fourth lesson in innovation: a vision may be really long-term but we need to be patient and flexible to create and realise market opportunities. However, today I think we are very close to accomplishing our initial vision. Most of the technical and cultural barriers are behind us. The robuter can fill a role. Let me give you a few examples. The first one is the ageing population. There are two main obvious consequences: fewer workers and more retired persons. An ageing population requires more services like security, cleaning or short-distance transport, and a robuter may help elderly people who want to stay at home as long as possible to move around and to communicate with their relatives.

I have not even begun, nor do I have time to address how robuters could help poor countries to develop and keep up with industrial countries. We have such a demonstration on our booth.

But today, ladies and gentlemen, I would like to send a message to you. I think European organisations have specific experience, know-how and market advantages in robotising services for,

as I said, transport, health, logistics and so on, let alone education and entertainment, which are regionally specific. Robuters will penetrate and support all these services.

VI. Sharing and Endorsing the Vision

Over time, I have learned a fifth and last lesson in innovation: a vision must be shared and endorsed by others. We at Robosoft are committed to making robuters improve services to consumers and change everyday life in the world. We expect this vision will definitely become a reality within five years. That is why I have entitled my speech 2011 – The Robuter Odyssey. This is a challenge we now share with Microsoft through the Robotics Studio development, supported by the IDEES programme in France.

Thank you for your attention.

Finland and Innovation

Matti Vanhanen

Prime Minister, Finland

I. Preamble

Thank you. Ladies and gentlemen, it is really a great pleasure to speak at this Innovation Day. I feel privileged to be here with you. Innovation is a crucial topic today. However, I feel that I should be the one listening to you rather than you listening to me.

II. Finnish Premium on Innovation

I understand that Innovation Day has become an annual event. In Finland since 2003 we have had an annual Information Security Day, which brings together business regulators, civil society and government to focus on improving data security. This is about promoting secure internet use by emphasizing user responsibility and taking adequate safeguards. The internet is an important everyday tool for all of us and we want to keep it safe. The inspiration for this event came from Microsoft in Finland and I am grateful for it, which is why I am telling you about our day.

Finland currently holds the presidency of the European Union. Innovation is a major priority for our presidency. Europe needs innovation to stay competitive and I think we need to take a hard look at the European innovation policy. We need to do more and get better results.

Finland takes innovation very seriously. As Prime Minister, I chair the Science & Technology Council, which brings together government, business and academia. Its main task is to review Finnish science and technology policy and I think we benefit from having a direct business input into this policy discussion. As Prime Minister, I also personally lead the Finnish Government's information society programme, which promotes the use of IT in developing Finnish society and government.

III. European Research and Development

Innovation is high on our political agenda, both for Finland and for the EU. My close personal involvement as Prime Minister sends a strong signal that innovation and development of the information society are important priorities for the government and for the state. Ladies and gentlemen, innovation is really the key to European competitiveness. European prosperity has always relied on innovation and in the past Europe had a reputation for being at the cutting edge of technological development. However, we need to recognise that others have overtaken us, first, the United States and, more recently, Asia. Europe needs to take innovation policy seriously if we are to prosper in the future. I recently saw a global survey on R & D spending by companies. Of the top 10 companies in terms of R & D, only three were from Europe. I believe that Microsoft was number five on that list. Among the top 50, only 17 companies come from the EU. These are not good results for a region that is supposed to become the most competitive in the world by 2010.

IV. Research and Development in Finland

At the same time, it is encouraging for a Finnish Prime Minister to see that even with a population of only 5 million, Finland features in the top 10 countries in terms of R&D. However, I think this has more to do with under-investment by other countries and companies than Finnish excellence.

V. Innovation in Europe

Europe is not poor in terms of innovation, but we have a real paradox. We invest substantially in education, and R&D spending is increasing, but for some reason the investment does not translate into successful companies, new products and good stocks. This is the problem that European innovation policy must address.

I strongly believe that Europe needs an innovation policy that is more company-driven, while government should focus on removing barriers to innovation. Creating the right market conditions is the key to improving the continent's innovation potential. If market conditions are not conducive to success, there is no sense in increasing spending on innovation.

Europe needs to take a critical look at these market conditions, and this includes issues that have nothing to do with science and technology. Examples of such issues include taxation, bankruptcy legislation and risk capital.

We also need to remember that Europe's greatest underlying competitive strength is its single market and the competitiveness it entails. Without the common European market, our companies would be lame ducks in a globalising world. The European Union needs to take the single market further, especially in relation to services.

VI. The Lahti Summit

This October we had a summit meeting for EU leaders in Lahti. We held a good discussion about innovation. Innovation policy is an ongoing process and it needs a wide scope to succeed. At Lahti, we touched on several key issues, including intellectual property rights, standards, technology platforms and the European Institute of Technology.

Most importantly, Europe needs a more efficient and Europe-wide policy on intellectual property rights. The European system of patents must be made more cost-effective and reliable, without compromising quality. We were not able to agree on a pan-Community patent system, but we may proceed with the London Protocol, which could simplify the patents procedure

Additionally, we need to improve the litigation system through developing the European Patent Litigation Agreement.

We should also consider the way in which we set European standards. Our process is too slow, which means that others usually set the standards. Mobile telephony is the one European success story, where the Global System for Mobile Communications (GSM) standard has become a successful global standard and a leader in its field. However, there are few others.

VII. Working Together

R&D in Europe is too fragmented. By pooling our efforts, technology platforms provide a new way to achieve critical mass. Many European companies have chosen to cooperate in different areas, from nanotechnology to embedded systems. At EU level, these platforms can be transformed into Joint Technology Initiatives, eligible for funding from the Seventh Framework Programme on research. I am very pleased ARTEMIS, a platform which focuses on embedded systems, has received a strong endorsement from the Commission and will go ahead as the first Joint Technology Initiative.

VIII. Understanding Technology Platforms

Technology platforms may sound very boring and technical, but I know that today's audience can see beyond that. They are a practical new way of improving our research performance and driving the whole process more from the private sector, which has been one great weakness in European innovation policy until now.

With technology platforms it is companies, not civil servants or committees, that identify promising areas. Naturally, companies need to bring their own money to the table, but it will be matched by public money from EU and national sources. Technology platforms represent Public-Private Partnerships at their best.

IX. An Innovation-Friendly Europe

I can sum up the challenges facing Europe in terms of innovation policy by saying that we need to make Europe more innovation-friendly. We should encourage the private sector to innovate by making structural reforms. As I said at the beginning, innovation is high on the agenda of the Finnish government. Innovation and R&D in Europe need to be more business-driven, and geared more towards the private sector.

X. The Role of Government

Europe has a history of heavy government, and we need to identify a useful, value-added role for government to play. I am not proposing a comprehensive list of what governments should be doing on innovation, or what the big challenges are. However, I will make a few remarks, based on my own experience of government.

Regulation is the core business of government. Issues such as competition rules are very important, but I believe that this is an issue that Microsoft knows well. Demanding regulation can also spur companies into becoming more efficient. We have witnessed that in the Finnish telecommunications sector.

Education is very important. A high standard of universal education is crucial for innovation in an age when everyone needs IT skills for their job, whether they are farmers or professors.

An aging population is one of Europe's real challenges. We need to be able to do more with fewer people, and this is where Information Technology and innovation can really help. Innovation is not only about new and better machines and products, it is also about changes in how we do things.

Government can also promote the use of IT and create demand for innovation through its own activities, such as in public procurement.

The public sector still needs to be active in financing research and development, especially basic research. This is the foundation upon which businesses can build their innovation work. The EU has set a target for every country to devote at least 3% of their GDP to research and development.

If we were to reach this target, we would see an increase of about €100 billion per year. I am convinced that this would generate huge amounts of innovation, and also research tops[?08.43] in Europe. Spending on R&D is really an investment in our future.

XI. Outside Europe

During the Finnish EU Presidency I have placed a great emphasis on developing cooperation between the EU and rapidly developing Asian economies.

However, we also need to make a sustained effort to combat poverty in the world at large. Sustainable development can be advanced by developing simple and robust technologies that can easily be deployed and used in the Asian and African countryside. With new technology we can improve the life of the poor, and give them a fair chance to improve their livelihoods. This is the real challenge. Thank you very much.

The Power Of Innovation

Bill Gates

Chairman, Microsoft

I. Preamble

Good afternoon. It is exciting for me to have a chance to speak as part of Innovation Day, because there is nothing more fun about my job and about being part of the IT industry than the rapid pace of innovation. In fact, it was just over 30 years ago, when Paul Allen and I saw the innovation of the microprocessor, that we realised that computing would change forever, and that a key element would be building a software platform and developing a software industry around that platform to take advantage of the computing power.

II. The Pace of Innovation

Year by year, the emergence of that appeared in the form of the personal computer, and now the personal computer is connected to the internet, and other devices, like the phone device coming in, and it really has fulfilled our dreams and our ambitions for what software could do. We are really just at the beginning, and I think if there is any message out of Innovation Day, it is that the pace of innovation over these next 10 years will be much faster than what we have seen in the past. And, many of these innovations are not just a matter of degree, such as a slightly faster processor, a slightly larger disc, but they are very qualitative in nature. The relationship we have to computing changes very dramatically when we move away from a basic keyboard and a mouse-type interaction, to having, as we walk around, the camera, the ability to make gestures, the ability to use a pen and have our ink recognise the ability to use feet, make computing pervasive, and there are so many applications, whether it is a business meeting, collaborating in the distance, interacting with the device that has got rich information on it, and interacting with your TV set. These have opened up in a very new and different way when those breakthroughs take place.

III. Continued Evolution

The miracle of the microprocessor, delivering twice as many transistors every two years, is not receding. Likewise the doubling in disc capacity, that now enables us to carry around our music and movies with us, is continuing at the unbelievable pace. Optic fibre speeds allow us to deliver high definition TV to every person in the house, personalised so that the advertising and the content is targeted. All of those things are coming along, even the high definition flat screens that allow us to present the information in a richer way, and the graphics processors that are bringing in a level of realism to both simulating reality and towards creating virtual realities. Those we can assume they will be in place, and so for a software company, we simply build on that and the rich software platform.

IV. The Importance of Universities

Innovation comes in many different forms. Some types of innovation take decades of work, for example the software that recognises speech, and doing that in very high quality. Some does not

take much time, and the idea of an entrepreneur, literally within a year, can go from starting the company to having a product in the marketplace. One thing I think you will see is that you are touring the demos and hopefully it came through to you in a strong way is that the structured innovation in terms of the different entities involved. We believe, very strongly, that universities have a key role to play. In fact if we look at why the United States has been able to contribute in information technology and biology, in a very strong fashion, is the strength of the universities, which have been the key to that. In fact, if you even look at where in the United States have these companies and new companies been formed, it is not necessarily where the population is; it is much more correlated with those top universities. In fact, when I gave the go-ahead for Microsoft Research, which is 15 years ago now, my greatest concern was whether that would enhance our relationship with the universities as opposed to being a block for our researcher, who would want to say that his approach was better and not necessarily to collaborate with the universities.

V. Great Advances

Fortunately, that has come out very well. It has dramatically improved the relationships we have had, including with our funded graduate students, and we have really taken that on a global basis, and in particular there are some top universities here in Europe, many dozens of them, that we have active exciting projects with, including several of the ones that you saw here today. Likewise, the ability to work with start-up companies, and licence their technologies, and make sure they have got the latest tools and some help in terms of exposing their products out in the marketplace, we think that is a very fundamental role that we need to play, and again many of the examples that you saw here drew on exactly that approach and we are excited about it. This is our third innovation day. It has grown every year, and I think the interest in innovation here and getting the policies right around is really fantastic. The Lisbon agenda was very ambitious, with the goal of getting R&D to 3%, looking at how the top universities can get the right R&D funding, and the increase in funding for a broad set of research activities, we are very excited to see that. We think that this is pushing things in the right direction, so that Europe can get its share of these great advances and participate in a very, very strong way.

VI. The Importance of Asia

When we think about Asia coming into the mix, overwhelmingly that is a good thing. It means that there are more smart people every day thinking about how to make reliable products, better medicine, taking this dream of the bytes in your pocket that will be your wallet and your camera and your mapping device and your schedule, and letting you communicate in new ways. People all over the globe are going to contribute to that idea and the big companies doing research work are now finding themselves with research labs all over the globe because in this competitive environment, we all want to draw on the great minds everywhere in the world. Microsoft has four major R&D centres, major research centres. One is in Europe, literally on the Cambridge campus – you do not have to go outside to go between the computer science building and the Microsoft building, which is physical evidence of the close collaboration, although we are also working with other universities. We have our research centre in the United States, which is the one that we started 15 years ago, and then we have one in China, and one more recently that we started in India.

So, basically, wherever there is one billion people, we are putting in a research centre. When people ask me, ‘When are you going to put the next one into my country?’ I say, ‘When you have a billion people, give me a call.’ Obviously I am doing that a little bit because we cannot put one in

very country, and we probably will do some additional ones, but I think what we have got today has worked very well for us.

VII. R & D Evangelism

We try and be an example, a real evangelist for companies in industry and research. We think that that has been our very best investment. The reason we have got a strong future is because we did that research, but not just our isolated research that we created this eco-system of research. That includes a group we have in Germany that is called EMIC that has participated in a number of the European-wide research projects, which has worked out very well for us, and in fact we are extending our activities significantly in line with the research investment that the community has chosen to make, and many of those innovations go into Microsoft products. Actually many of them are being licensed as start-ups, because they are ideas that are more appropriate for somebody who is looking at the market size of 50 million or 100 million rather than our company which is more attuned to markets that are, say, 500 million to a \$1 billion in size. So, we have big companies licensing intellectual property from small companies, and vice versa.

VIII. The Future

I was really pleased to hear the remarks before mine about the commitment to innovation, and looking at some of the issues about making sure that the systems are strong, making sure that the ecosystem works very well together. That is another goal of this event, to get quality makers talking about the success stories, thinking about how that can be done in the right way, because it is not a simple topic. However, I do think, of all the things that will determine how well Europe gets its share, or even more, of the improvement in the economy and creating the great jobs around innovation, that these topics, particularly those related to education and intellectual property, will make a very big difference there. So, it is an exciting time to be working in these fields. Some of these things will create challenges for governments. Of course, not only do good people use technology, bad people use it as well, and so there has got to be a lot of dialogue about what comes out of that, but I would say overall, whether it is a malaria vaccine that will be transformative for Africa, or getting computing so that every young kid around the world can go in and use that and pursue their curiosity, overwhelmingly, what comes out of this is that it is very exciting and thrilling to be a part of it. Thank you.

Questions and Answers

Chair

Bill, you travel the world, looking at research and development and innovation in different places. What would you say, in that context, are Europe's strengths, that we can really build on here?

Bill Gates

No one is going to be isolated in this global community, so it is not like any one country is going to go off completely on its own. The big companies are in many locations. Even universities now have these cross-border collaborations that are taking place. Clearly, there are areas like clean energy, mobile computing, embedded systems, language translation, and you can pick about a

dozen topics where Europe today has either a market demand for the product that really spurs investment, or they have got intellectual capacity that is ahead of the other countries. So, I do not think it will be black and white. If we take a topic like security, we need contributions from all over the world, and in fact our UK lab is doing some very key, great things there. But, I do think you can pick some focuses, even regionally within Europe you can pick some of these focuses, and that helps. When you want to build the world's press institution, focus is helpful.

Chair

Matti, you have talked also about this, and the Yahoo report talked about the importance of market to innovation, which has been an underplayed bit of the story in Europe, in some ways. How does this notion of lead markets actually play out, do you think? How do we really generate markets for innovation?

Matti Vanhanen, Prime Minister, Finland

I am underlining the importance of markets, because we still have our common market borders, and especially in some areas. We have to get from the market to the demand for European innovations, and that is why we have to underline the importance of a well-functioning common market. I am also speaking about this because it is at the heart of the European Union's competence. It is a question of whether we can act at a union level because in the many other areas of competitiveness, the responsibilities lie at the national level. That is why the markets are so important. I listened very carefully to each speech, and I have found that there are some key words for the European Union, especially R&D funding, top universities, and especially the cooperation between companies and universities.

Chair

I was interested in what you were saying about this narrative of openness and collaboration coming forward, but IT is also critical to your story of innovation. What is the role of IT in promoting that kind of collaboration between small and large companies, or with universities? How do you foster that, and yet also hold onto the value of your innovation?

Bill Gates

It is very clear that incentive systems are the things that affect behaviour more than anything else, and a grand experiment was run by having communist incentive systems and less communist incentive systems than we thought, and what the outcome was. The incentive systems are around things like copyright and patents, and that has been along with universities, the thing that has allowed the US to really be very strong. The idea that when you invent a new drug you should have a patent right for that. If you invent a new approach in software you should have a patent right in that. This causes venture capital to come in. It causes success stories, and Europe has that. We discussed this, and I agreed with everything you said, that it is a little cumbersome in the way that it works today, the cost and the fragmentation, so I think there are some improvements to be made. Obviously, for a small company, what they can do is patent their ideas, and then when they approach a large company they are protected. They can share those ideas, expose those ideas to everyone, and yet know that they have their invention and some benefit will come to them from having done that work. If you do not have that, then their incentive is to try and keep it secret in ways that do not provide the biggest benefit to the society at large.

Chair

I just want to ask you one more question along those lines. I am also very stuck by your account about China, and seeing China as a huge contributor to world global intellectual resources. There are some very big IT issues in China as well, aren't there? Are the Chinese really willing to pay for the technology that is being developed here, rather painstakingly over many years?

Bill Gates

Absolutely. That is one of the amazing things that I think has been missed, that China has made so much progress. They are not totally there yet, but through their patent systems, and enforcing copyright, they know they will be a net beneficiary, because they are an inventive economy. They do not see themselves as just a factory that does knock-offs, or something like that. They have got universities like Xinghua that are amongst the best in the world, and so it is almost ironic how much they are improving and embracing these incentives. In a certain weird sense, they are actually a little more capitalistic than some other countries.

Chair

A little bit more capitalistic?

Bill Gates

Well, you have to separate various aspects of that, because of course, in some respects, that is not the case, but they are driving forward and they have local companies, and they know, for foreign companies to increase their activities there, these are very key issues. In the last two years, they have made great progress, and whenever I go and meet with Chinese government officials, their interest is in, for example, how professors can get a piece of the patent rights, and how the university commercial boundary works. It is incredible. They are asking the right questions.

Chair

They are very, very serious people. Matti, how does Europe create a really entrepreneurial culture? We have got lots of knowledge. We have got, potentially, a very large market. Why haven't we got more high-growth entrepreneurs?

Matti Vanhanen

We have good examples. There are several European companies that are good examples, and I hope that there will be others that can follow them, so do not underestimate Europe too much. We can be there. With innovation policy, what we can do at European level, the main things are common standards. There, we should be more active. Then, of course, there are intellectual property rights. It is an important question. Then we still have to force our member states companies to invest more in R&D, and then find out how we can also get small and medium-sized companies into the networks where they can find European talent from corporations and universities.

Chair

Bill, final question, and this is the question which I imagine that everyone here is dying to ask. As chairman of Microsoft, do you get to play with all that stuff out there at home?

Bill Gates

Well, my meetings with my research group are the best part of my job, because they are always bringing me new ideas and breakthrough things. We have done quite a good job of getting those into products. We try and do that with as much urgency as we can. The reason that Microsoft got involved in personal computers was because my co-founder Paul Allen and I wanted one for ourselves, and so I sit and talk about the Xbox 360, or the Zune, or the new version of Office, and it is nice that I can sit there and say, 'Hey, what would I like?' It is nice that I can sit and say what I would like to people with common interests. I love playing with this and the main thing I say is how quickly can we get it to market.

Bulgaria and Information Technology

Nikolay Vassilev

Minister for Public Administration, Bulgaria

I. Preamble

I would like to say a few words about our country as a good destination for IT, innovation, research and development. I would also like to say a few words about our development of e-government. Bulgaria is a relatively small country in southeast Europe and we are happy to become a member of the EU on 1 January, together with our neighbour, Romania.

II. Bulgaria – Now and in the Past

You might know that in the past we were quite good in IT. In the old days in the Eastern European Bloc, we specialised in the production of computers and software. Even today we are number three in Europe and number eight in the world in terms of the number of IT specialists per capita, just behind the UK.

We also have over 150 Cisco and Microsoft academies in the country. Annually, our universities produce over 5,000 computer science students and 5,000 engineering science majors. Our kids also seem to be quite talented. It is a tradition in our country that our teenagers win a lot of mathematics, physics and informatics competitions in Europe and in the world. In terms of IT R&D capacity, we have over 1,000 small and medium sized IT companies in the country. We have long traditions and also over 80% of our software exports are related to the EU and the US.

III. Foreign Investment

Our government made significant efforts to attract a lot of industry and foreign direct investment, including in the high tech and IT area. In the last five years, we significantly decreased all of the direct taxes in the country. To give you an example to prove we are the lowest direct taxes country in Europe, from 1 January, businesses will be paying only 10% corporate tax. The personal income tax rates are of course progressive, starting from 0% for the poorest and ending at 24% for the richest people in the country. We also have zero tax on interest income and zero capital gains tax.

I am telling you this because I think taxation matters to IT people and we have many Bulgarians who work with the leading multinationals in the world, and we would like to have some of them back.

IV. Technology Penetration

In terms of the penetration of internet in the country, in the past we were not very advanced to put it mildly. Today we are just two years behind the rest of Europe. We expect that next year we will have 45% internet penetration, equal to the Czech Republic and higher than Greece. With broadband the situation is similar. We have had strong development lately. This year it is 9.3%, similar to where Europe was just one year ago.

We have had an intensive computerisation programme over the last two years. Two years ago, in my previous capacity as the Minister of Transport and Communications, participating in a similar conference organised by the European Commission, we saw all the European rankings and realised that in terms of the education computerisation, Bulgaria was at the bottom of all tables in Europe.

Within two years, we invested in more than 40,000 modern PCs and servers and gave them to our universities and schools. We also connected the whole educational system with broadband. All of our 3,200 schools will have broadband access by 2007. We also created over 100 so-called tele-centres across the country, mostly in small municipalities where people do not have good access to computers. Now our country looks very, very different with a whole generation of students being able to use much better content and being connected to broadband.

V. E-government

A very similar story is with the development of e-government. A year ago, I moved to my third ministry, the Ministry of Data Administration and Administrative Reform, which is responsible for the development of e-government. Again, we saw that Bulgaria was at the bottom of all European rankings, and we decided that by the end of the mandate of this government, this should change.

We have six parallel projects for 2006. The first one is major changes to the legislation. We passed the law on e-trade this year and at the moment, Parliament is looking at the new law on e-government. This is a radical law. We used the best experiences of a few European countries – including Finland – so this law should significantly change not only the technology but the way the government's administration is communicated to people in terms of procedures and documents more than technology.

We have some relatively large public procurement procedures, based on the size of our economy, for the development of software platforms for national and regional European e-government. They should be finished next year and we will have many of these platforms operating well. We also

distributed a lot of computers to local administration, especially to those that were more backward. We are also strongly encouraging the usage of electronic signatures. This year, we had a 20-fold increase in the number of electronic documents in use in the country. Next year we are expecting another three-fold increase and after that it will become a story similar to the mobile phone. The mobile phone penetration was very interesting 10 years ago and five years ago, but everybody has a phone today.

In terms of IT training, Bulgaria might be breaking a few records on the continent. This year we are training 21,000 civil servants in IT skills, in a country with less than 8 million people. Next year we will have another 21,000. Our whole state administration will renew their skills.

VI. Conclusion

In conclusion, Bulgaria has strong ambitions, just like the rest of Europe. We are a part of the whole Lisbon agenda. There are three conclusions.

- We need to be quick. As a politician, I can tell you that government mandates start and end very quickly. We have to have that in mind and finish everything very quickly.
- We do not like pilot projects. A lot of people started pilot projects this year, but the mandate will be over in four years and we will never be able to develop the whole country. We like the blanket approach, where you cover the whole country with one policy within one year and then you are done.
- We need energetic people with vision to implement all of the good ideas. I think Eastern Europe and Bulgaria in particular bring a lot of energy to the continent and to Brussels as well.

Conclusion

Chairman

I. In Summary

Thank you, Nikolay. That fascinating account just underlines some of the themes we have been discussing today. I was struck by Nikolay's point that we want to go for speed and big, bold policies. There is also this point about diasporas. Innovation is going to come from more places and it will come from more people. Strong countries may well be those with diasporas of technicians abroad who they can attract back. That is the story of Taiwan and the emerging story of India. The ability to attract back talent, particularly from the US, will become critical.