

Summary of the Joint Meeting between the Science and Technology Policy Council of Finland and the Estonian Research and Development Council

Tuesday, 15 April 2008

List of Attendees

Finnish delegation:

H.E. Mr. Matti Vanhanen
Mr. Erkki KM Leppävuori, *Director General, VTT Technical Research Centre*
Mr. Markku Mattila, *Director General, Academy of Finland*
Mr. Veli-Pekka Saarnivaara, *Director General, Tekes*
Rector Marja-Liisa Tenhunen, *Central Ostrobothnia University of Applied Sciences*
Prof. Päivi Törmä, *Helsinki University of Technology*
Rector Keijo Virtanen, *University of Turku*
Mr. Petri Peltonen, *Director General, Ministry of Employment and the Economy, permanent expert*
Ambassador Jaakko Blomberg
Mr. Esko-Olavi Seppälä, *Secretary General*
H.E. Mr. Jaakko Kalela, *Ambassador of the Republic of Finland to the Republic of Estonia*

Estonian delegation:

Mr. Andrus Ansip
Mr. Tõnis Lukas, *Minister of Education and Research*
Mr. Juhan Parts, *Minister of Economic Affairs and Communications*
Mr. Ivari Padar, *Minister of Finance*
Mr. Richard Villems, *President of the Estonian Academy of Sciences*
Rector Alar Karis, *University of Tartu*
Rector Peep Sürje, *Tallinn University of Technology*
Mr. Allan Martinson, *Managing Partner of the Martinson Trigon Venture Partners*
Prof. Mart Saarma, *Director of the Institute of Biotechnology, University of Helsinki*
Mr. Linnar Viik, *Lecturer of the Estonian Information Technology College*
Prof. Mati Karelson, *Member of the Estonian Academy of Sciences, R&D policy adviser to the Prime Minister*
Mr. Gunnar Okk, *Vice-President of the Nordic Investment Bank*
Mr. Keit Kasemets, *Strategy Director, State Chancellery of the Republic of Estonia*
Mr. Indrek Reimand, *Head of the Science Department, Ministry of Education and Research*

1. Opening of the Joint Meeting of the two Science Council's

Estonian Prime Minister Mr. Andrus Ansip opened the joint meeting between the two Councils. He stressed that Cooperation between Estonia and Finland is in fact very good. Finland has played a great part in Estonia's success story - together with FDI from Finland in 1990s, Estonia also got Finnish business culture. Today approximately 25% of all the FDI coming into Estonia is originated from Finland.

He mentioned that the first common meeting of the two Science Councils was held in 2004. After that cooperation between our universities, institutes and companies has intensified. Today we have approximately 150 joint projects which are uniting Finnish and Estonian universities. It is a good start, but clearly there could be even more joint-projects. Cooperation between Estonian and Finnish scientists is based mainly on personal relations and is not supported with institutional cooperation and policy framework. In that respect it is possible to enhance cooperation.

Finnish Prime Minister Mr. Matti Vanhanen stressed that the first meeting between Estonian and Finnish councils had back then a high and relevant symbolic value. It was a first official bilateral meeting between Estonia and Finland as EU member countries. He also mentioned that after the meeting we have seen quite an increase in the cooperation. In addition to science and education cooperation around 4000 Finnish companies are operating in Estonia. Our next joint challenge is to find mechanisms for deepening that cooperation.

2. Presentation of the Estonian Research and Development and Innovation Strategy 2007-2013 "Knowledge-Based Estonia"

Mr. Indrek Reimand, the Director of the Science Department, Ministry of Education and Science gave an overview of the Estonian and Development and Innovation Strategy 2007-2013 "Knowledge-Based Estonia". The strategy has three main objectives: competitive quality and sufficient intensity of research and development; innovative enterprises creating new value in the global economy; and innovation friendly society aimed to long-term development. It takes into account Estonian specifics: we are very small, catching up country and we have a very unfavoured starting point. The strategy has four main measures which are horizontally designed: development of human capital, efficient organisation of public sector and RD&I; increasing enterprises' innovation capacity and policy making aimed at long-term development in Estonia. The strategy also has vertical measures, which are national programmes.

Estonia's objective is to reach GERD up to 3% in 2013. About 2000 Estonia started a major growth in enterprise R&D support and from 2006 onwards Estonia started a substantial infrastructure reconstruction. Today Estonia has started to enhance our human factor support measures as the main challenge for Estonia is the falling number of researches and R&D personnel/human resources and the scope of our innovation policy. Estonia is also broadening the "innovation policy definition" - earlier it was only high-tech sectors, now the goal is to widen it to mainstream business and services, demand support, cluster etc.

In case the strategy is successfully implemented it is possible for Estonia to reach strategic goals for coming years - to achieve 1,5% of GERD in 2008 and 1.9% in 2010.

3. Presentation of the (new) Finnish National Innovation Strategy

Mr. Petri Peltonen, Director General of the Ministry of Employment and the Economy gave an overview about the new Finnish Innovation Strategy. Science, innovation and technology are still the central elements of Finnish government agenda. Finland has set a very ambitious target of trying to reach a 4% level of GERD in 2011. It was also noted that although the share of R&D investments to GDP has decreased, the absolute investments to science, research and innovation, both by the government and industry, are increasing.

Innovation policy should not only be money issue, it has to be extended and rethought in many areas. The key is to start thinking globally in planning innovation policy – the role, especially the competitive edge of regions, should be emphasised. Estonia and Finland are one competitive region in the global arena and the main challenge for us, but especially for Finland, is to develop a borderless innovation policy.

More systematic and holistic approach for innovation is needed in Finland, therefore better governance of innovation structures is needed e.g. strengthening the role of science and innovation council and strategic management across policy sectors.

4. Possible Cooperation Opportunities and Joint Initiatives between Estonian and Finnish Science and Technology Domains proposed by Finland

Prof. Markku Mattila, the President of the Academy of Finland stressed that research, development and innovation is a core of the Government program. One key issue in this agenda is the internationalisation of the R&D policy. The cooperation with neighbouring countries gives a good potential to the implementation of the new international strategy of the Academy of Finland.

Following main opportunities for Estonian-Finnish cooperation in science, innovation and technology policy were brought out:

1. Cooperation in individual research projects, which in the future could include Estonian scientist.
2. Multilateral cooperation in European Union and Baltic Sea Region: joint support could be envisaged in the policy discussions. Also, as a basis, it is of utmost importance that the visibility of information concerning co-operation possibilities is increased.
3. Cooperation in the Baltic Sea protection area, e.g. in the form of a joint Baltic Sea Research Programme, to be implemented under Article 169 of the EC Treaty. It is coordinated by the Academy of Finland and Estonian scientists are very active in this area. It requires political support in the European Council and in the European Parliament and long-term financial commitment at least to 2016, which must be jointly developed.
4. TEKES has started its new programme VESI and they are also looking for international cooperation. Estonia is being looked at as one of potential partners.
5. Finland and Estonia should jointly take full use of various innovation and education programmes of European Union (Framework Programme, COST, EUREKA, ERANETs, ESF etc).
6. Estonia and Finland should to the full extent use national R&D programmes, which are a natural forum for cooperation (e.g. energy, environment, climate research, health and welfare).
7. We should also think about cooperation between our centres of excellences - they may run joint research activities and share research infrastructures and cooperate in research

training ability. There is a huge possibility to improve the human capital, which seems to be the urgent target for both countries.

8. One specific cooperation project is to develop a SMEAR (Station for Measuring Ecosystem-Atmosphere Relation) station in Estonia to the Järvelja forest research station and networking with Finnish stations. Cooperation in this field exists (between Estonian University of Life Sciences and University of Helsinki), this project would enhance it.
9. Possible cooperation in the development of joint research infrastructures (like Biocenter Finland, Center for Scientific Computing etc.) and joint targets on the European level in the formulation of the ESFRi policies and priorities, was brought out.
10. Researcher training and mobility was brought out as one of the key areas and also as a real challenge for cooperation. The development of joint graduate and doctoral schools, grants for post doctoral positions in Estonia and Finland, researcher mobility, systematic cooperation between the schools should be thought of.
11. Exchange of peers for scientific evaluation was brought out. Joint panels for scientific evaluation (e.g. chemical and material sciences) could be developed.
12. Also other activities such as different type of R&D&I policy conferences for decision making, scientific conferences (like historic research, Baltic Sea research training, innovation conferences etc.) are useful tools for spurring grass root level cooperation between scientists.

Prof. Mattila concluded his speech by stating that cooperation strengthens the status and positions of both Estonia and Finland as a global players in the field of science and technology.

5. Possible Cooperation Opportunities and Joint Initiatives between Estonian and Finnish Science and Technology Domains proposed by Estonia

Prof. Richard Villems, President of the Estonian Academy of Sciences, emphasised that Estonia has set the quality of science as one of its top priorities. All major research projects e.g. Centres of Excellences are evaluated by high quality external experts.

As one part of the so called feedback process Estonia has carefully analysed the results of the 6th framework program. Quite surprisingly, the success rate of Estonian SME-s was very high over all the years – one of the best in EU. Finland is very close to Estonian success rate. Estonia has been good in green biology, environmental protection and life sciences. Success of Estonian SME's in so successful highly competitive framework programme provides excellent basis for cooperation with Finnish companies performing R&D activities.

As for the 7th framework programme, the overall success rate of Finnish projects is above 30%. For Estonia it is 22%, which is higher than EU average and above Estonia's previous performance. Estonia has already received close to 15 million euros and Finland close to 90 million euros through the FP7. Thus, again, providing a solid base for joint projects in the future.

In Estonia, the number of ISI published papers and citations have grown remarkably. The raise of the quality can be directly linked to the very high growth rate of the public expenditures for science, which now starts to pay off.

The relations between Estonian and Finnish scientists are extremely good: there are no restrictions for establishing grass-roots contacts. On the European level the idea of European Research area was launched 7 year ago, but not many things have happened since then. It is thus

clear that the research area should be built up cluster by cluster from a more bottom-up perspective.

As a last key issue Prof. Villems stressed the notion of global warming and stated that Estonia with Finland and perhaps together with Scandinavian countries have to establish a strategy of adaptation. In this case we should look at the Netherlands as an example, who have already acknowledged that what we are facing is inevitable (the temperatures will rise for the next 300 years) and thus are developing their strategy. The next intergovernmental report on climate change with a new baseline will be ready in 2013. We should start to discuss these issues between our countries and its scientific domains with at least the same kind of time horizon.

6. Intervention: Joint Research and Development Infrastructure Development

Prof. Mart Saarma, the Director of the Institute of Biotechnology in the University of Helsinki, stressed the utmost importance of the joint development of R&D infrastructure. Timing for joint planning and enhanced cooperation is excellent as EU, Finland and Estonia are all working with the infrastructure roadmaps. Cooperation focus could be on medium-sized and unique infrastructures, which are very expensive and require highly educated personnel e.g. biomedical areas, drug development, various robotized systems for structure biology, protein analysis etc.

Prof. Saarma also highlighted very modest funding of Estonian-Finnish joint projects. He stressed that there are actually no significant bilateral funds even for the support of young scholars. Therefore, governmental bilateral program or private foundation should be established to fill the gap in supporting bilateral R&D activities.

7. Intervention by the two wise men Mr. Gunnar Okk and Mr. Jaakko Blomberg

Mr. Gunnar Okk, speaking on the behalf of the two wise men, stressed that the main focus of the Report would be to examine on how Estonia and Finland could jointly improve their capabilities to respond to the challenges of globalization and to come up with some concrete recommendations. In addition, vision of the Finnish-Estonian integration for the year 2030 will be envisaged.

Two countries face similar challenges. The core issue is the global competitiveness. As a result of globalisation, international economic competition has intensified, including in the field of investment locations. Regional economies are more and more compared to each other based on the business climate they provide. But globalization has also increased the opportunities for regional economies, which now can serve much larger markets in the world and reap the fruits of more efficient production practices of goods and services elsewhere.

Mr. Okk acknowledged that while Finland is doing well in international comparisons of competitiveness, Finland still fails to attract much of the global investment flows. Estonia needs a shift from competing based on low wages, to competing based on reasoned investments in skills and infrastructures, complemented by continuously improving business environment.

Report will as well deal with the question of what it is that is unique about Estonia and Finland. What kind of value can our countries deliver to business communities in other parts of the world where we want to have influence? Integration and particularly joint development of infrastructures are key words in that respect. Another challenge is the need to optimise the role of governments, possibilities to enlarge public services, especially digital services and to combine

open and competitive markets with a public sector, which is willing and able to invest in upgrading competitiveness.

It was noted that the level of innovation is the key element of competitiveness for both countries. Long-term investments are particularly important for innovation-based competitive advantages. Also the improvement of overall business environment remains a critical issue.

It was brought out that national strategies, which are currently country-specific, should incorporate much more cross-border elements. And in doing so, broader international cooperation must be engaged.

The second joint meeting of the science, research, development and technology policy councils serves as an excellent opportunity to facilitate needed knowledge, understanding and trust. As for the recommendation, proposal was made to hold these meetings regularly, once every year.

8. Evaluation/impact assessment of the Finnish Science and Technology policy measures.

Mr. Veli-Pekka Saarnivaara, the Director General of Tekes, stressed that impact assessment is one very crucial part of getting feedback for investments in R&D. In Finland it is used to develop innovation environment in strategic and operational level.

The impact assessment at the Academy of Finland is focused on three main areas: the research system, organisation and the operational processes. The evaluation of research system concerns the review of the state and quality of scientific research and the evaluation of disciplines. The state and quality of scientific research in Finland is reviewed once during the three-year term by Academy Research Council. Next review will be completed in next year (i.e. 2009). Evaluation of the impact of disciplines and research fields is to provide information on the social, technical and economic impacts of research. The Academy of Finland also evaluates and makes assessment on every research programme.

The impact assessments carried out by Tekes also concerns several layers:

1. Input and output results on operational level done by Tekes itself;
2. Evaluations of individual concepts, instruments or programmes is done by assignment of Tekes (usually by international experts);
3. Evaluations, assessments and studies on outcome level is done by universities, research institutes or consultants independently or by assignment of Tekes;
4. National and international indicators and benchmarking on impact level.

The whole innovation support system is evaluated by the Ministry about every 5th years.

The basic framework or concept of evaluation is a four-level system starting from investments, coming to results, then direct effects or outcomes and then impacts on national economy and society. Assessment is combined with strategic long-term and operational objectives.

On the result level, Finland is looking at the output and behavioural additionality. It means that funding should be linked with a change in the nature of the R&D project, its capabilities or competencies. The most challenging aspect is the impact on national economy and society - it is very hard to differentiate what is the impact of a single actor like Tekes or the Academy of Finland on the whole system. In this context, productivity development, industrial production development, some impacts on society like competence based or regional employment development are followed. Also various international benchmarking rankings are followed.

Mr. Saarnivaara also brought out that by the assignment of the Science and Technology Policy Council of Finland, the Academy of Finland and Tekes Finland have to create a comprehensive framework on the impacts of science, technology and innovation. The deadline for this work is the end of this October.

Mr. Andrus Ansip noted in conclusion that the evaluation and impact assessment issues will have an increasing importance in Estonia too. In the context where Estonia's R&D investments have increased rapidly - in year 2000 investments from Estonia's state budget were 373 million Estonian kroons, in 2008 already around 2 billion - this is very important. This increase of funding is remarkable even in the EU.

9. Evaluation/Impact assessment of the Science and Technology Initiatives in Estonia

Mr. Keit Kasemets, Strategy Director of the State Chancellery of Estonia, noted that Finland is lot ahead in field of impact assessment from Estonia. Estonia plans to start a comprehensive impact assessment at the end of 2008 and finish it probably in 2010. Finnish experiences in that field would be very useful for Estonia. Estonia has a long way to go concerning measuring the output of the R&D policy. Innovation policy is not only money issue and therefore, exchange of experiences concerning the design of the impact assessment framework and looking more deeply into the policy implementation, could be very useful.

Mr. Kasemets proposed that in the long-run Estonia and Finland should very seriously think of joint impact assessment for joint policies - especially to assess where the joint policy effort could bring the highest value. This kind of assessment would be also very useful in supporting political decision making.

10. Discussion

Discussion afterwards was evolved around four main topics: development of human capital, Finnish university reform, the development of information society and joint research priorities/projects.

It was stated that the key to success is the development of human capital and that one specific area of collaboration in this field could be seen between doctoral schools. We need highly qualified doctors and the integration of Finnish doctoral schools with Estonian doctoral programs would be very important for bringing the quality of our doctors to a higher level. It was also added that the question of sustainability is of key importance in Estonia. Recent studies have shown that if Estonia would like to invest 3% from our GDP on R&D, we have to have at least 600 more PhDs in Estonia.

It was also discussed whether there is room for Estonian universities to be involved in University of Innovation in Finland. As a general comment it was noted that Finland is not thinking about creating only one Innovation University as the whole Finnish university system is going through a major reform. The outcome is that all the universities will be either public agencies or institutions outside of the government structures i.e. private foundations. As for The University of Innovation is concerned, it will be connecting three universities in Helsinki and it will be very strongly internationally driven. Estonia is one evident partner here. The specific government structures have to be discussed with the Ministry of Education, since they are in charge of the reform in Finland.

From the Finnish side there was a remark that there is a very strong drive in Estonia towards information technology and information society issues. In this terms Finland has not been that successful, especially exploiting the information technology in public services, and is thus interested in cooperation and change of experiences. It was also acknowledged that the majority of information society development in Estonia has been on the national level and thus not many cooperation projects exist. However, Estonia and Finland together with the wider Baltic Sea Region appear to be in a leading position in this field in the world and thus serious consideration on cross border e-government development should be considered.

Finally the discussion evolved around whether it would be possible to decide on a top level, which are the sectors Estonia and Finland need to jointly work on (for example biotechnology and a joint biotechnology programme). No specific conclusions about priority sectors were made - it was left up for the councils to discuss in their follow up activities. As for specific joint programmes, clear need for R&D joint infrastructure development was highlighted.

11. Declaration of the Prime Ministers on the follow up activities

The two prime ministers adopted the following amended declaration: “The two Prime Ministers invite all relevant Estonian and Finnish organisations in the R&D and Innovation domains to tighten daily cooperation. They specifically encourage exchange of experiences and information as well as undertaking joint activities by Finnish and Estonian organisations.

On the basis of held discussions and bearing in mind the proposals to be made in “the Report of two wise men” the Prime Ministers assign the two Councils a capacity to work out proper follow up actions. It is to be stated that possible national and joint follow up actions shall be discussed in the Councils within 2008. Derived from the discussions in the Councils, specific country proposals for joint action will be proposed.”