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Conference on Nordic Innovation Policies for the Future

– Main challenges from a Systems Perspective

November 10–11 2003 Malmö

REGERINGSKANSLIET

Final Report

Conference on Nordic Innovation Policies for the Future

– Main challenges from a Systems Perspective

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Welcome

The last conference held during the Swedish presidency of the Nordic Council of Ministers was on Nordic innovation policies for the future. The conference served once again to prove the importance of Nordic cooperation. Few countries enjoy such favorable conditions for cooperation as the Nordic states; few have such close relationships and strong historical connections. It is important for us to identify synergies and continue the Nordic integration process in areas we identify as offering potential mutual benefits.

The purpose of the conference was interaction and mutual learning while discussing policies for promoting innovation. During two days in November 2003, experts and policy-makers met to exchange experiences from meeting the challenges of promoting innovation: What are we doing well? What can we promote?

It is well known that innovation is a central element of growth. Growth in turn is an issue of vital importance for maintaining and developing further the existing level of welfare in the Nordic countries. The sustainable growth and welfare of a society depend on its people, its businesses and its public authorities having the capacity to develop, acquire and put into use new knowledge.

To improve the innovation climate it is necessary to cooperate in different policy areas, including competition, trade, employment and regional and environmental policies. However, it is important to realize that the state cannot single-handedly create a good climate for innovation. Neither the market nor political measures alone can provide sufficient conditions for sustainable growth built on knowledge and an entrepreneurial spirit. In order to transform knowledge and technology quickly into production and services, various actors in academia, industry and public services must cooperate and interact dynamically on a regional, national and international level.

To conclude, the arguments presented and conclusions drawn in this report will constitute a valuable foundation for ongoing work on the development of Nordic innovation systems. They will also be used at the conference of ministers to be held in September this year.

Claes Ånstrand
State Secretary

Background

The intention of the conference was to develop strong Nordic cooperation for the purpose of establishing a competitive edge through developing effective innovation systems. The program addressed current issues concerning innovation policy in the Nordic countries, with a focus on the sharing of experiences.

The conference became a forum for officials within ministries and government, as well as consultants and researchers working with issues relating to policy-making at a national or regional level, applying an innovation systems perspective.

Four workshops were held in parallel during the conference to discuss central innovation topics. These topics were Horizontal Innovation Policy, Evaluating Performance of National Innovation Systems, Foresight and Innovation Policy and Innovation Systems and Clusters-Policy Challenges. The workshops form the basis of the edited final report presented here, which contains recommendations and conclusions. A very interesting method was used for the discussions. Each workshop began with speakers describing the theme of the workshop, followed by a case study. Discussions were then held in groups, continuing in a newly-formed group within each workshop. The other participants observed and listened, and were later given the opportunity to reflect and comment on the discussion in new groups. The process ensured that all participants were involved and active, and that there was a good exchange of views. This process was very well received.

During the conference there were a number of presentations in plenary meetings. Information about these presentations can be found on the following web page: http://www.naring.regeringen.se/nmr2003/itfou_malmo

Proposed declarations for the Meeting of Nordic Ministers of Industry in Akureyri, Iceland – Recommendations from the four workshops

- The Nordic Council of Ministers should invite the Nordic Industrial Fund to initiate a collaborative effort by the relevant authorities in the Nordic countries, e.g. in the form of a Nordic working party for sharing experiences, identifying strengths and weaknesses in our respective National Innovation Systems (NIS), and discussing possible policy implications, based on different perspectives and the somewhat different institutional NIS set-ups in different countries.

- Due to the overlapping issues between ministries the management of innovation policy processes is important. To gain credibility coordination of innovation has to take place at a high policy level.

- International policy learning becomes more important as the policy becomes more complex. At a Nordic level, targeted benchmarking and learning networks could be ways of increasing competence concerning innovation policy and innovation policy measures. However, it is important to be aware of the context and the specific conditions in countries and regions.

- Foresight can be used as a tool for improved policymaking, since it explores possible and desirable futures. Foresight has a great potential to reveal opportunities and strengths, as well as important problems and barriers.

- In order to be successful, foresight sessions must be both user-oriented and based on interaction and active participation. A lack of the mentioned factors will result in a serious lack of legitimacy for both the process and the findings.

- We need a common language and we need to define “innovation”. Benchmarking and the development of indicators are important. If we get better at Nordic collaboration we will produce a common Nordic language.

- Public authorities should support cluster initiatives. Infrastructure, education and venture capital are examples of action that can be taken by the public sector. A cluster policy can promote cluster initiatives by creating arenas for meetings, inspiration and support, workshops and seminars.

- Governance in a cluster must work from the bottom up. Informal communication and networking is fundamental. Governance of a cluster involves several players. There is a need for well-developed collaboration between these players. It is essential in a cluster that public authorities collaborate with the business sector.

Horizontal innovation policy

The workshop was introduced by a presentation by Svend-Otto Remoe. His presentation concerned Horizontal Innovation Policy: Issues and Challenges. The case study discussed Emerging Horizontal Science and Innovation policy in Iceland, and was presented by Dr Vilhjálmur Lúðvíksson. The following discussion mainly concerned innovation strategy, the impact of policy and policy change processes.

There is a need for a government innovation strategy at a national level, and possibly also on a Nordic level. Such a strategy would not only need to address the right issues, it also needs to design and establish an implementation strategy that generates synergies between different administrative policy areas and bodies at both national and regional levels. There are major innovation policy gaps between research policy and industrial policy. This calls for an integration of most policy areas, including economic policy, that require a re-organisation of government processes.

The target for innovation policy has to be focused on impact. It is important to be able to evaluate innovation policy for continuous learning and reappraisal. The impact of innovation policy is expected to develop in a long-term perspective and it takes time to involve stakeholder as, except the policy sphere, the academia and the industry. This is one thing that is important to bear in mind when considering evaluation.

A horizontal innovation policy needs to incorporate all ministries and policy domains into a coherent policy. Innovation systems are influenced by a broad range of governmental actions in the policy system. Objectives and ambitions should be reflected in all governmental areas and be followed up by resource allocation. A horizontal approach places new demands on governments' modus operandi.

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Evaluating National Innovation Systems: Workshop wrap-up

The introductory speakers Erik Arnold and Kimmo Halme presented a very thorough and systematic approach for assessing the performance of national innovation systems.

In particular, the workshop discussion highlighted the fact that:

An innovation systems perspective changes key evaluation perspectives

This may seem like a simple statement but it is not. It is surprisingly easy to end up with a linear and partial perspective. A different perspective means that we are moving away from classical evaluations: Inter-dependency between an institution and its environment become increasingly important. Furthermore, the unit of analysis shifts from individuals to networks and clusters, with poor integration leading to an ineffective overall performance. It is necessary to focus more on tracking flows of knowledge, quality of interlinkages and outcomes – and there is an obvious lack of relevant indicators. One must also bear in mind that we can assess NIS performance at different performance levels: at an individual level, at a macro/systems level and at a policy/framework level.

It is also worth bearing in mind that the performance of National Innovation Systems (NIS) is to a large extent determined by slow-changing factors (more or less) outside Government control, such as cultural factors, technological paths and systems of governance.

The national dimension of NIS is a massive challenge in itself. But we also need to focus on international interlinkages – and to remember that research-driven innovation is not the only aspect worth watching: market-driven innovation is increasingly important – and poses additional challenges when assessing NIS performance.

At the same time it is worth remembering that a recent EU report stated that "A final conclusion, therefore, is that innovation systems are too important to be left to the players involved. A degree of political interest and concern is required, both to prevent stagnation and encourage development", European Commission (2003), *Raising EU R&D Intensity. Improving the Effectiveness of the Mix of Public Support Mechanisms for Private Sector Research and Development*.

Finally, the workshop discussion underlined that there is always room for the sharing of experiences and mutual learning. At the same time one must resist the temptation to subscribe to a one-size-fits-all model for assessing NIS performance. A common challenge is to utilize available knowledge for practical purposes. The 1,000 dollar question with respect to NIS performance is: What does it all mean? Do we in fact have well-functioning national innovation systems? Where we see potential for improvement and what do we see as major strengths and weaknesses? How do we feel about policy implications? In particular, do we feel that present NIS policy has the right focus, with respect to correcting systemic failures and lock-ins?

A final impression

In our interpretation, the workshop set-up helped facilitate a more stimulating discussion and broader-based participation than is normally the case. To some extent this also comes as a result of succinct presentations by the two introductory speakers.

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Foresight and innovation policy

This workshop was structured around presentations by foresight project manager Marja Toivonen and Dr. Birte Holst-Jørgensen. Toivonen introduced the session with a synthesis of experiences from foresight studies and its impact on innovation policies. Holst-Jørgensen then developed the subject further as she presented the major results from a regional case study on hydrogen energy.

Foresight can be seen as a systematic attempt to study possible evolution paths of the future. Visions of tomorrow make it easier to get a picture of desirable futures and how it is possible to turn them into reality. In this respect foresight has a great potential to reveal problems and barriers that otherwise would not have been discovered. By systematically removing low-value alternatives, foresight can also be used as a tool to decrease the number of available decision options.

It is also important to create a catalyst for radical thinking during a foresight session. Modern technologies such as mobile phones, fax machines and television are currently used in a complete different manner than their inventors originally had intended and imagined. Experiences from past foresight studies also reveal that the future cannot be predicted in an absolute sense. But even if the whole truth cannot be disclosed, foresight studies can still provide us with better information and important fragments of the answers we are seeking.

The success of a foresight session lies in its organization. In order to achieve legitimacy, trust and participation, foresight sessions must be structured as an interactive process with an explicit desire to involve a wide range of stakeholders in continuous discussion. The foresight session must also be constructed in a way that makes it possible to actually use the results and implement the findings. In order to shape the future, the challenge is both to express the forecasts as concrete proposals and to establish an ability to take action. However, as a rule there is not just one solution. Different subjects demand different strategies. In order to learn about the future it is therefore desirable to experiment with several foresight models and use international benchmarking as means of achieving improvements.

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Innovation Systems and Clusters – Policy Challenges

Summary of the introduction: Arne Eriksson, Consultant, Sweden

What does it take to be a competitive region in the future and what are the major strategic challenges? Mr. Eriksson made a speech dealing with the growing interdependencies between industries, companies, organizations and regions. Clusters are being initiated all over the world today. Ministries and authorities cannot work alone with these kinds of undertaking – collaboration and joint action with, for example, academia and local business is vital. Problems arise when attempts are made to formulate clear policies and policy measures aimed at developing or enhancing cluster functions. Complex relations, which characterize clusters, require a horizontal policy, which has yet to be developed. Mr Eriksson described four cluster characteristics, which all imply new policy challenges; complexity, communication, collaboration and competition.

Summary of the case presentation: Bent Christensen, Medicon Valley Academy, Denmark

Mr Christensen made a speech dealing with Öresund Science Region. One main conclusion that can be drawn from his lecture is that collaboration between Denmark and Sweden needs to be increased in order to support cluster building in the Öresund region. Some features for successful public sector support of a cluster are, according to Mr Christensen, to provide venture capital in early stages, innovation structures and efficient cluster governance. Collaboration between university, industry and public authorities is of vital importance. The main reason for building a cluster is to develop a strong knowledge platform, which can in turn contribute towards regional specialization and international competitiveness.

Important issues

Clusters and innovation do not emerge from the top down. Every cluster building must start with a social gathering, a demand for collaboration. Cluster building is the creation of something that is not yet in place but builds on top of existing structures. Seminars, workshops and communication are important at the beginning. Meetings are fundamental.

In a cluster there is always both collaboration and competition. In a cluster you develop similar products and knowledge, sharing the same skilled personnel.

A cluster depending upon one single industry is highly vulnerable. The cluster theory should be used to develop business areas that attract several industries and many small businesses.

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