



Germany's Leading-Edge Cluster Competition – A contribution to raising Europe's profile as a prime location for innovation

Speech by Dr. Georg Schütte, State Secretary at the Federal Ministry of Education and Research within the framework of the European Cluster Conference in Brussels 29 September to 1 October 2010

Ladies and Gentlemen,

The European Union and its Member States – that means all of us – have once again taken on quite a task. And rightly so! The Europe 2020 Strategy is necessary; the path to a European Innovation Union is crucial if we want to position ourselves at the forefront in the competition between the world regions. And Europe can do this.

However, we will not be able to achieve new growth simply by expanding our existing economic and technological basis. In other words, the challenge facing Europe – and presumably the rest of the world as well – is to find new pathways to growth and employment that are based on a fundamental, qualitative rerouting of our economic system towards greater sustainability.

Commission President Barroso expressed this central idea in the programme for the new European Commission when he drew attention to the need for a new, sustainable market economy as the starting point for overcoming the current crisis: A market economy which is based on knowledge, where prosperity is created on the basis of innovation and the improved use of resources, and where knowledge is given the highest priority.

To achieve this we can rely on Europe's strength: That is to say, its cultural and economic diversity. This strength is reflected in its research landscape and industrial structures. It is expressed in the large number of leading-edge clusters and the great potential for world-class clusters which characterize Europe as a prime location for innovation. After all, the global competition is often a competition between world regions.

The spatial and cooperative dimension of innovation processes has not only entered the scientific but also the political discussion. Cluster policy is booming. It helps to ensure intelligent, sustainable and integrative growth. Our conference will provide many practical examples to this effect.

That is why it is a particular pleasure for me to speak to you today about the German Government's cluster-based innovation policy as an element of its High-Tech Strategy. I am delighted to be able to speak from the perspective of a research ministry which is dealing intensively with innovation processes. I regard today's invitation as an expression both of a new approach and of the need for an interdepartmental innovation policy. We can only improve the conditions for successful innovations and for the development of lead markets in Europe in the long term by making use of the various instruments in all fields of policy – be they environmental standards which encourage innovations, measures to reduce bureaucracy, or the promotion of education and research.



Research and innovation are moving steadily closer to the centre of the European Strategy for Growth and Employment. We will have a coherent and comprehensive raft of innovation policy measures for the European Innovation Union – similar to those that we are aiming for with the High-Tech Strategy in Germany.

The crisis is not yet over, but things are getting visibly better. We are delighted that our country is at the fore with regard to growth rates. The World Economic Forum's latest Global Competitiveness Report has lifted Germany two places to fifth place, just behind the USA. Switzerland owes its renewed top position in particular to its innovative strength. The same applies to Sweden, which takes second place. This is a clear confirmation of a policy which champions the knowledge triangle of research, education and innovation.

During the crisis, Germany continued to invest in research and education. Companies also followed suit and did not slacken their research efforts. There is a good chance that our overall R&D rate for 2009 will have reached 2.8%. Despite its consolidation course, the Federal Government will invest an additional 12 billion euros in education and research in this legislative period. The 3% target is close at hand. In addition, together with the Länder, we have agreed to spend a total of 10% of our Gross Domestic Product (GDP) on education and research by 2015.

Absolute investments in knowledge are one thing. But we will not reap the full benefits until cooperation between industry and science runs optimally. This is the aim of our Leading-Edge Cluster Competition. This flagship of the German High-Tech Strategy, which was launched in 2007, is perhaps the most important measure to promote the development of the knowledge triangle in Germany.

Cluster or regionally based research and innovation policy has a long tradition at the BMBF. The Leading-Edge Cluster Competition is consistently extending this approach and is also developing a new dimension with the targeted deployment of funding. Today, after three years, I can say: The flagship of the High-Tech Strategy is under full sail. Ten leading-edge clusters are already on course. You will be able to meet representatives of the leading-edge clusters at this conference.

And so the competition – which I intend to describe in more detail in the following – has not only gained national but also international respect. Please feel free to take a brochure containing up-to-date information from our stand in the foyer.

I. Why did we launch the Leading-Edge Cluster Competition?

We are witnessing the dynamism contained in regional concentration and intensive cooperation between bright minds working in innovative areas; and we want to be able to compete with the very best on a level playing ground. This is why we are supporting the most efficient clusters in Germany. We want to unite companies, scientific institutions and other stakeholders in a region to form strategic partnerships.

The competition is achieving this:

- Industry has been providing at least 50% of the funding for the leading-edge clusters from the very start.
- The focus on applications and industry is evident: Approximately three quarters of the funds go on so-called industrial research and pre-competitive development work.
- Small and medium-sized enterprises receive 40% of the funding set aside for industry.
- At the same time, the science sector is also involved. Approximately 30% of the public funds go to research and educational institutions.

The Leading-Edge Cluster Competition is enabling us to mobilize the potential of the regions and help clusters to heighten their profiles and measure themselves against the world's best. This funding of a good 40 million euros per cluster over a five-year period is money well invested.



II. When is a cluster “leading-edge” in the sense of the competition?

The competition takes an open-topic approach. We do not select clusters according to a specific field such as health or energy, or according to a certain technology. Rather, we look at how the cluster is structured, what level of innovation it intends to achieve, and what strategy it is pursuing to achieve this goal.

For example, we consider whether it plans strategic, regionally focused cooperation along the entire innovation chain – in other words from the laboratory to the workbench to the salesroom. We look at the cluster’s strengths and consider its potential for development. But first and foremost we ask: Can your cluster trigger a clear and sustainable burst of development and is the cluster economically viable in the long term? A cluster is considered to be leading-edge in the sense of the competition if we are convinced by its entire strategy.

The theme of the cluster is not immaterial – although this is not a criterion for selection within the competition. We are interested in leading-edge technologies and cutting-edge fields – as demonstrated by the clusters which we have selected.

- One of these, for example, is “Solarvalley” in central Germany which deals with saving energy, new energy technologies and thus with climate protection.
- Three clusters focus on health: The “BioRegion Rhine-Neckar”, the “Medical Valley European Metropolitan Region Nürnberg” and the “Munich Biotech Cluster M4”.
- “Luftfahrtcluster Hamburg” and “LogistikRuhr” have set their sights on efficient and resource-saving mobility.
- The “emergent” software which is being developed by the “Software Cluster” between Darmstadt and Saarbrücken will introduce completely new concepts for communication and control in companies.
- “MicroTEC Southwest” is expected to make important contributions to the field of security as well as to saving energy and medical technology.

The fields of action of the High-Tech Strategy 2020 provide clear guidance in this context. The selected clusters contribute to tackling central global challenges.

The increasing consumption of resources, global warming, the growing world population, demographic change – no country and no region in the world can manage these enormous challenges alone. On the contrary – political and economic decision-makers must develop a willingness to exchange their knowledge and experience at international level in order to find new solutions together.

The leading-edge clusters are therefore called upon to actively seek opportunities for European and international cooperation. One such example is the important role played by the “Hamburger Luftfahrtcluster” in establishing the “European Aerospace Alliance”, which was presented here yesterday.

III. What are the success factors of the leading-edge clusters?

The flagship Leading-Edge Cluster Competition has been able to gather speed because we have worked together to ensure favourable winds. The measures taken by all the stakeholders in industrial and innovation funding have provided a thrust and are continuing to do so: These steps include the network initiatives of the Economics Ministry and cluster initiatives launched by the regions, Länder and the European Union.

If public-sector funding and support programmes are consistent – and if they occasionally involve constructive competition – well-managed clusters will be able to select the measures they need from this portfolio. It is not a matter of designing the clusters “top-down”. Such clusters are not viable. Nor is it sufficient to certify clusters according to statistical criteria and then simply label them “leading-edge clusters” or “world-class clusters”. We need vibrant clusters with appeal. They must be able to provide a convincing performance in the international arena.



It is also important – and this is the basic approach of our High-Tech Strategy – that we do not stop at funding research and technology. Innovations are made by people; they must be introduced by people and they must be purchased by people in order to be successful. The leading-edge clusters approach this issue from two directions: On the one hand, they support training places, courses of study or endowed professorships in forward-looking sectors. On the other hand, the clusters must develop an international appeal and magnetism of their own. By linking research and education, the Leading-Edge Cluster Competition is treading important new ground as a funding instrument. After all, as the European Union we are competing against the world's leading regions in the field of innovation.

IV. Evaluation attests: The right approach

Our Leading-Edge Cluster Competition is still in its infancy. I cannot yet read out a list of all our successes, citing an increase in the number of patents, products and skilled staff. However, we have already been able to take up the recommendations of the team of experts led by the RWI (Rhine-Westphalia Institute for Economic Research), which is accompanying and evaluating the Leading-Edge Cluster Competition over a five-year period.

I would like to mention one point in particular: There were initial problems with the practical implementation of the concepts as far as cluster management was concerned. The second round of the competition therefore attached greater importance to the matter of cluster management. This topic is regularly the subject of the exchange of experience between the clusters, and also played an important role in our cluster conference in Berlin in February.

We are thus absolutely in line with the programme of the European Cluster Conference.

The results of the evaluation to date endorse our funding policy. Together with the independent jury of eminent experts – which, by the way, is a significant factor for the success of the competition – we are convinced: There is the potential for a third round in the Leading-Edge Cluster Competition. It will begin at the end of the year. The course will then be set for mobilizing a total 1.2 billion euros for implementing the cluster strategy of collaborative projects over three rounds between 2008 and 2017. This figure includes the 50% contribution from companies.

V. Finally: The European dimension

The global race for the brightest minds, for technologies and markets is intensifying: global spending on research and development has doubled since 1997. Europe can be proud of its absolute figures for investments in research and innovation, even if only a few countries have actually reached the 3% target. This is an important starting position for European growth and innovation policy.

Policy-makers cannot simply introduce laws and regulations decreeing innovation. Innovation needs people and these people must have a stimulating political environment for research and innovation. This means that inclusive and holistic approaches to innovation policy must include more than just the conventional measures of research and technology funding – I already mentioned this in the introduction to my speech. The current debates on the “Post-Lisbon Strategy” emphasize the importance of strengthening the concept of the knowledge triangle in this context – in other words, the close ties between the policy areas of research, education and innovation.

The interplay between local focal points in the form of growth centres, clusters, and innovation hubs, on the one hand, and European and even international networks, on the other hand, is of outstanding strategic importance in this context. The principle “Think globally – Act locally” also applies to research and innovation”.



Europe has broken new ground in its cluster policy by founding the European Institute of Innovation and Technology (EIT). The idea is to combine the concept of local focal points with that of international networks. Here the German leading-edge clusters are also making their mark in the European context. The Leading-Edge Cluster Competition has produced important focal points for the German collocation centres in two of the three KICs of the EIT: These are the CASED software cluster at the Technical University in Darmstadt in the KIC on the future of information and communication technologies, and Solar Valley Central Germany in the KIC on climate change.

The Leading-Edge Cluster Competition provides Germany not only with an efficient instrument for building strong bridges between industry and research in Germany, but also for positioning its national expertise in a wider European context and mobilizing new strengths through synergies.

After all, the German leading-edge clusters are not only involved in activities at the EIT, but also in the cluster-policy measures of the Directorate-General “Enterprise and Industry”. This is evident at this conference. And I assume that Germany’s experience with the Leading-Edge Cluster Competition has also influenced the recommendations of the European Cluster Policy Group since Professor Ketels, a member of our jury, was also involved in this group. I don’t want to anticipate the presentation, but I would like to say that we endorse the three fundamental principles which it sets out:

- Cluster programmes must be integrated in a broader context of growth and innovation policy. Clusters need appropriate framework conditions.
- Funding must be based on excellence (or top-class performance) and dynamism.
- A clear distribution of roles is desirable – with the regions and Member States bearing responsibility for the individual clusters and the Commission being responsible for supporting European networking and ensuring good practice.

Leading-edge clusters or world-class clusters, which have been developed bottom-up on a national basis, can provide an important contribution to raising Europe’s profile as a top location for innovation. However, this means focusing clearly on our specific strengths. Even for countries like Germany, there is a limit to the number of new leading-edge clusters that can be announced year for year.

Let us therefore work together to establish a Champions League of European leading-edge clusters. By doing so we would be creating top European teams which could become drivers for growth.