

Go8 Backgrounder 24a

The German Excellence Initiative
update

November 2012

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Executive Summary

As described in *Go8 Backgrounder 24: Answering the Global Challenge – Experiences from European Excellence Initiatives*, Germany began a debate about how to strengthen its position as an excellent location for science and research in 2004. This debate focussed in particular on the competitiveness of the country's universities and research centres with respect to international standards. Considering the profound and global challenges that Germany and other countries were facing, politicians and researchers agreed that Germany would need to reform its scientific and academic system in line with the benchmarks set by leading nations. Germany had to become more attractive to scholars from other countries and needed to increase its international competitiveness and visibility as a research location.

The German Research Foundation (Deutsche Forschungsgemeinschaft, DFG), a self-governing organisation funding the bulk of research projects in Germany was the primary leader of this debate. DFG serves all branches of science and the humanities. In organisational terms, the DFG is an association under private law. Its membership consists of German research universities, non-university research institutions, scientific associations and the Academies of Science and the Humanities. DFG is the country's largest research funding organisation with an annual budget of €2.5 billion provided in part by the federal government (2/3) and in part by the federal states (1/3).

The most important outcome of this debate was an agreement on the Excellence Initiative by the German federal and state governments. This took the form of a contract between the German federal government and the federal states, signed in 2005 with the specific aims of funding top-level research, enhancing the international visibility of research activities, and driving fundamental structural change.

University research funded through the Excellence Initiative has to be conducted in large networks and in cooperation with non-university research institutions. The initiative also established a structured system of education and training for doctoral students, to make Germany more attractive to young international scholars.

The German Research Foundation and the German Council of Science and Humanities (Wissenschaftsrat) were given responsibility for implementing the Excellence Initiative, which had three streams of funding: for graduate schools, for clusters of excellence, and for institutional strategies to promote top-level research in the whole institution (so-called 'future concepts').

The goals of the Excellence Initiative in Germany

The agreed goals of the Excellence Initiative were to:

- promote top-level research in universities and to raise their international visibility,
- create outstanding conditions for young scientists at universities,
- deepen cooperation between disciplines and institutions,
- strengthen the international networking of research,
- promote equality between men and women in science,
- intensify the scientific competition in Germany and to enhance the quality of Germany as a science location

The goals of promoting top-level research in universities, raising their international visibility, creating outstanding conditions for young scientists and deepening cooperation between disciplines and institutions were pursued mainly by funding excellence clusters and graduate schools.

The establishment of a **cluster** required a broad, interdisciplinary plan and this challenged the existing fundamental and disciplinary approach of German research managers in universities. The development of a large-scale, multidisciplinary, comprehensive research project made necessary new ways of perceiving and structuring research. This gave rise to a communication process that required, built on and developed mutual respect between researchers in different disciplines. Researchers benefited from this process because it broadened the foundation for their scientific success, but also because it developed innovative ways of conducting research that was new to their own field.

Universities were able to form a **graduate school** within a cluster as well as independently from it. In either case, the cluster provided enormous extra value for the graduate students, not least by expanding their disciplinary focus. Connecting with trans-disciplinary issues enabled young scientists to debate and explore subjects beyond those possible within a conventional disciplinary approach and from a broader perspective. This was beneficial to their potential careers as well as to their immediate scientific education.

Future concept funding provides a means through which a university can develop its long term strategies. In order to seek future concept funding, a university has to have been successful in obtaining funding for at least one cluster of excellence AND one graduate school.

The assessment of 'future concept' applications was based mainly on the structures and regional environment of the applicant university. The strategies supported were to enable German universities to achieve high international visibility as institutions, with their institutional reputation separate from that of the individual achievements of scientists and their groups but complementing it.

Developing a 'future concept' was a process of institutional "branding" in the context of the international higher education market and of proving a future-oriented stability, especially regarding structural and financial sustainability.

The role of the DFG and the German Council of Science and Humanities

The German Research Foundation (DFG) and the German Council of Science and Humanities together coordinated the Excellence Initiative, which included three funding streams – clusters, graduate schools and future concepts. The German Council of Science and Humanities was responsible for the future concepts funding stream, the DFG for the two others.

To coordinate the initiative, the DFG and the German Council of Science and Humanities established a joint commission composed of the Expert Commission of the DFG and the Strategic Commission of the German Council of Science and Humanities. The Grants Committee of the Excellence Initiative, which included members of the Joint Commission and federal and state ministers of science, made the funding decisions. The ministers of science had the majority of votes on the Grants Committee.

Offices of the German Research Foundation and the German Council of Science and Humanities organised and supported the entire selection process and the later evaluations of the initiative. Their role consisted of selecting experts, conceiving the standardised surveys and organising inspections. This work made it possible to compare individual institutions and prepare the international experts for their task.

The assessment process for the clusters of excellence and graduate schools employed around 700 experts, 80% of whom were from abroad. Around 300 experts evaluated the universities' future concepts.

The DFG was able to draw on its past experience in research funding for this process. The universities greatly benefited from the 'professionalisation' of the process particularly in the second round of the competition.

The second round

Procedures

Universities had their final opportunity to submit funding proposals for the second round in 2010, following a call for proposals. The participation of non-university research institutions was welcome.

The policy underlying the funding had the aim of building on realistic information on the sustainability of long term institutional change, as in the first round of the competition. The funding round was therefore much more of a competition between federal states than a competition between individual universities.

Proposals were sought in two stages (stage 1: draft proposals and stage 2: full proposals). Draft proposals and full proposals were assessed by international peer review panels.

Sixty-four universities (two thirds of all universities in Germany) submitted 227 draft proposals for this second round of the initiative. Their breakdown into the individual funding streams was as follows:

- 98 graduate schools
- 107 clusters of excellence
- 22 institutional strategies

On 2 March 2011, after reviewing the draft proposals, the Joint Commission selected 32 universities to submit full proposals. These proposals entered the competition along with the 84 initiatives which had already been funded by the Excellence Initiative in the first round. The new draft proposals were divided into individual funding lines as follows:

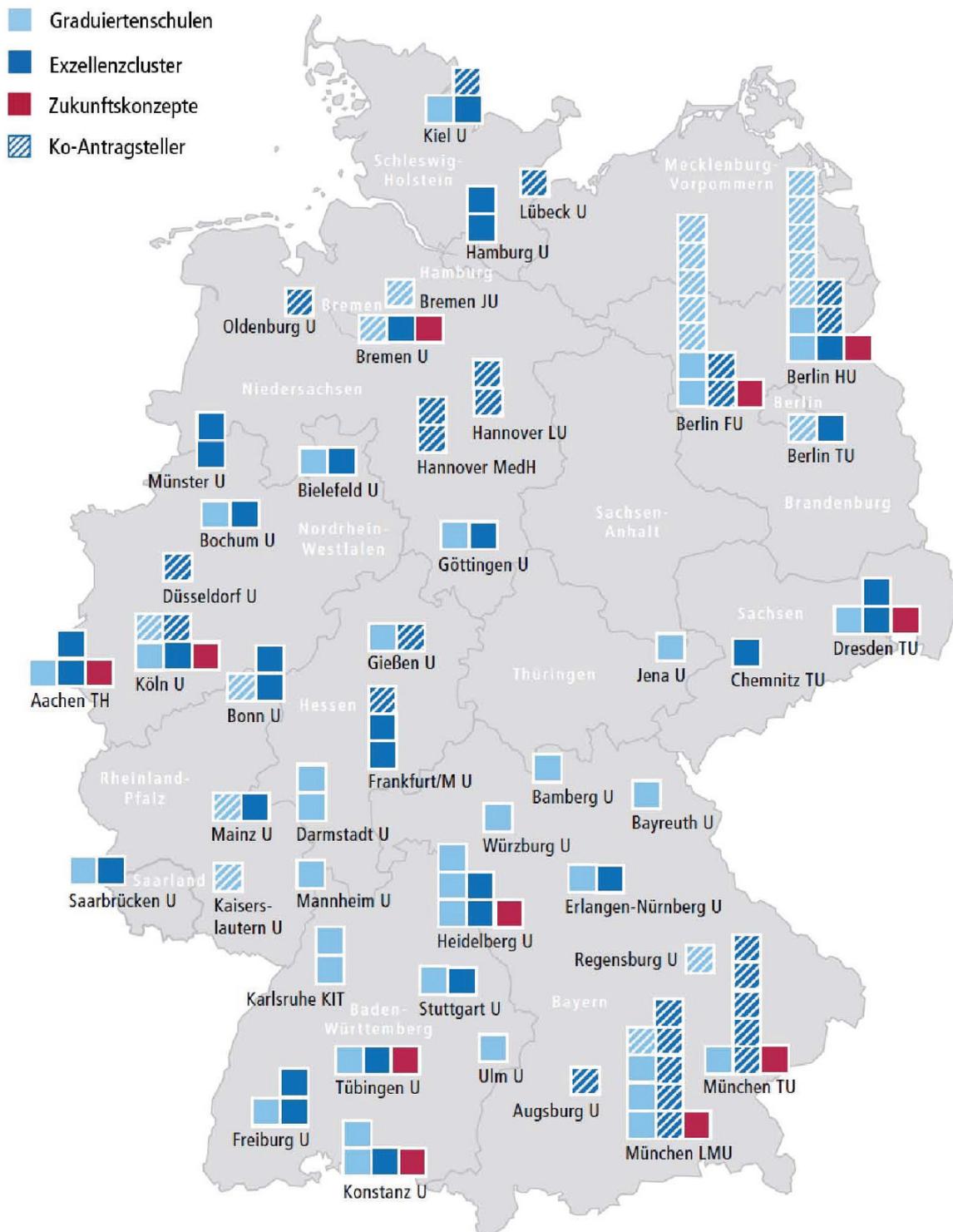
- 25 draft proposals in the funding line "Graduate Schools"
- 27 draft proposals in the funding line "Clusters of Excellence"
- 7 draft proposals in the funding line "Institutional Strategies"

Outcomes

Funding decisions for the second round of the Excellence Initiative were made by the Grants Committee on 15 June 2012 (fig. 1). A total of 143 proposals from 46 universities were evaluated and the Joint Commission decided to support 45 (33 continuing, 12 new) graduate schools, 43 (31 continuing, 12 new) clusters of excellence and 11 (six continuing, five new) institutional strategies. In summary, 39 universities will receive €2.4 billion in the funding period from 1 November 2012 to 30 October in 2017.

For the state of Berlin and its three universities for example, this means a grant of €311 million until 2017, of which the state government will be paying 25% (€78 million).

Figure 1. Final Decisions in the Second Phase of the Excellence Initiative, June 15, 2012



Source: German Research Foundation (DFG). URL: www.dfg.de/download/pdf/foerderung/programme/exin/entscheidung_exin_karte_120615.pdf

Every competition has its losers. The universities of Göttingen and Freiburg were not able to convince assessors that their future development concepts were worthy of continuing support; and the Karlsruhe Institute of Technology (KIT), a merger of a university and a national research centre, did not receive continuing funding for an interdisciplinary research cluster. This lack of success means they have lost a significant revenue stream, which will make it difficult for them to continue to implement future concepts. In practical terms, these three institutions each will lose around €20 million a year.

The **future concepts** of the following institutions are funded according to their "Institutional Strategy":

Universität Bremen: "Ambitious and Agil"

Universität Köln: "Meeting the Challenge of Change and Complexity"

Universität Tübingen: "Research-Relevance-Responsibility"

Universität Dresden: "The Synergetic University"

Humboldt-Universität zu Berlin: "Individuality – openness – guidance"

RWTH Aachen: "RWTH 2020: Meeting Global Challenges. The Integrated Interdisciplinary University of Technology"

Universität Heidelberg: "Realising the Potential of a Comprehensive University"

Universität Konstanz: "Modell Konstanz – Towards a Culture of Creativity"

Technische Universität München: "TUM. The Entrepreneurial University"

Ludwig-Maximilians-Universität München: "LMUexzellent"

Freie Universität Berlin: "Veritas-Justitia-Libertas. International Network University"

Criticism and scepticism were part of the process

Alongside the generally positive reception of this initiative by both the civil and political communities, the competition has also received a great deal of criticism.

Some researchers in universities claimed the initiative developed a "two-class society" of scientists, those who took part in the competition with support from their university, and those who continued with the "normal" academic life.

Significant resources were taken up in applying for cluster and graduate school funding but applying for a future concept grant occupied the entire institution. Universities had to invest considerable resources in the application process for which they were not reimbursed and with the risk of that they might receive no funding for the effort involved. Additionally, applicant institutions committed further and future resources by making major pledges about their future investments; and they developed visions for their future research strategies. These inevitably led to fundamental changes in the institutions which were bound to these commitments and visions.

Criticism often came from the renowned scientists who were taking part in the competition. Some suggested, for example, that the model of North America, which has long served as a progressive example for the German educational system, cannot work in Germany because its structures and political frameworks are fundamentally different. Transplanting what was seen as an American model without recognising these differences was seen as inappropriate.

Universities were also sceptical that the DFG and the German Council of Science and Humanities would make science-driven decisions without responding to political motivations. Moreover, the initiative was also a competition between federal states. The state of Bavaria, for example, sent state funding to its universities before the competition as part of its own state-wide Excellence competition so that they could prepare for the nation-wide Excellence Initiative. The state of Berlin, on the other hand, was not able to offer its universities such financial support. However, in conjunction with the competition, it founded the Einstein Foundation which can provide for the sustainability of the big clusters funded by the Excellence Initiative.

Unusually for Germany, all the selection processes were carried out in English. This caused unrest among researchers, particularly in the humanities, who felt that not being allowed to make their presentations in their native language made it more difficult for them to argue their case. By the second round of the competition, the majority of contestants had improved their English language skills and criticism died down.

Students also criticised the competition for being focussed exclusively on research and unlikely to produce immediate improvements in teaching. There are no tuition fees for state universities in Germany and teaching is financed from the normal budget. The scientists who took part in the Excellence competition successfully were no longer at the students' disposal given their increased research activity, as the students had feared. This is an important issue because compared to the amount which a university such as the ETH Zurich spends per student (€66,000), not to mention Harvard (€100,000), funding of a student of a German university averages €11,000 on average.

Institutional experience

All the universities which took part in the Excellence Initiative obtained benefits additional to the possibility of receiving financial support needed to create the basic conditions for excellent research. The competition stimulated reflection and debate on strategy building and this gave rise among almost all participants to coordinated action and efforts at the university level never seen before.

The competition promoted internal communication in all universities and led to positive outcomes including the development of a greater appreciation of the complex environment within which universities are operating and research takes place. Individual stakeholders in the universities became aware that the complex, global issues in research and the need this creates for trans-disciplinary research groups, both provide new challenges for the organisation of research, communication processes and for administration. This resulted in the professionalisation of staff in the non-scientific area in the institutions, something which would not have occurred without the competition requirements. The universities developed an appreciation of the need for the further education of their staff who directly support the work of the scientists and of the need for collaboration with other universities and institutions.

Challenges

Germany's science and innovation system has been permanently changed and influenced by the decisions of the Excellence Initiative and by the pact for research and innovation on the funding of non-university research. Robust and sustainable strategies are now necessary to maintain and further develop the innovation system strengths that the Excellence Initiative has created.

The success of the initiative has led to a renewed discussion about how universities in Germany with their renewed focus on excellence can compete against outstanding institutions abroad in funding competitions; and on how they can play an enhanced role in Germany becoming a preferred location for science and innovation. Universities are also exploring new forms of cooperation with non-university organisations and the business sector. Besides the need to overcome legal hurdles which can inhibit this cooperation, universities also need to protect the profile which they developed through the Excellence Initiative and, while focussing on the priority areas identified by the public and policy makers, continue to maintain broader capabilities.

