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Tasks, criteria and procedures of the **Evaluation Committee** of the German Council of Science and Humanities

CONTENTS

I.	Forms of evaluation	5
II.	Composition and task assignment of the Evaluation Committee	6
III.	Aims of the evaluation	7
IV.	Procedure of the Evaluation Committee	8
V.	Criteria of the evaluation	9
VI.	Applications for joint funding within the Leibniz Association	14
VII.	Principles for successful evaluations	15
VIII.	Follow-up to the implementation of evaluation recommendations of the German Council of Science and Humanities	18

I. FORMS OF EVALUATION

The German Council of Science and Humanities conducts evaluations at various levels across a wide spectrum of forms of evaluation: |¹

- _ Evaluation of scientific institutions/institutes (individual institutional evaluations), including evaluations in the context of the procedure for the inclusion of institutes and large strategic exceptional appropriation requests in the joint funding programme of the Federal Government and the states (*Länder*) within the scope of the Leibniz Association.
- _ Structural investigations of individual subjects, multidisciplinary areas of research (e. g. environmental research, energy, materials) or types of research infrastructure (e. g. scientific collections, library associations) focus on institutional structures (research institutions, research infrastructure establishments, funding structures etc.) and the cooperation of institutional units (collaborations, alliances) without pursuing the objective of conducting an evaluation of individual research institutions. The objective is rather to describe the status of a discipline, of a multidisciplinary area of research or of a type of research infrastructure in international comparative terms (analysis of strengths and weaknesses) and to draw up recommendations for further development and funding.
- _ System evaluations concentrate on issues relating to the organisation, structure and management of scientific bodies. System evaluations pursue both an internal and external perspective. They investigate instruments and forms of management within a scientific organisation and the relationship to other sectors within the scientific system.
- _ Evaluations of programmes and institutions of research funding assess these with regard to their aim, concept, procedure, fulfilment of tasks and impact and give recommendations on their further development, taking into account the surrounding funding landscape.
- _ Institutional evaluations of research infrastructures assess the quality and importance of research infrastructures as well as the need for certain infrastructure facilities from a scientific and – if applicable – comparative perspective.
- _ The comparative assessment of research performance in individual disciplines at university and non-university institutes in the Research Rating of

|¹ Cf. Wissenschaftsrat: *Empfehlungen zu Querschnittsbegutachtungen in der Forschung*, in: *Empfehlungen und Stellungnahmen* 2002, vol. I, Cologne 2003, p. 217.

the German Council of Science and Humanities is based on specific criteria of research performance for each subject. It aims at pointing out the different profiles of the rated institutes or domains.

II. COMPOSITION AND TASK ASSIGNMENT OF THE EVALUATION COMMITTEE

Members from various areas of research and representatives of the Federal Government and of the *Länder* sit on the Evaluation Committee of the German Council of Science and Humanities. The Committee is chaired by a member of the Scientific Commission of the German Council of Science and Humanities. Membership of the Evaluation Committee should not exceed six years.

The Evaluation Committee acts as a steering body for evaluation tasks including the clarification of methodological issues. It appoints working groups for each evaluation at the request of the Council. The range of issues it addresses is as follows.

- _ Institutional evaluation of non-university institutes at the request of the Federal Government and/or *Länder*, also in connection with the inclusion of institutions in the joint funding programme of the Federal Government and the *Länder* within the scope of the Leibniz Association.
- _ System evaluations in connection with the appraisal of the individual institutions of a non-university area (e.g. Leibniz Association, governmental research)
- _ Institutional evaluation of institutes of higher education (university faculties/ institutes except for medicine) at the request of the *Länder* including subject-related structural evaluations (e.g. humanities centres at institutes of higher education)
- _ Questions of a methodological nature in connection with quality assurance via evaluation.

Institutional evaluation procedures of the German Council of Science and Humanities follow the principle of the separation of scientific evaluation and the science policy statement (two-tier procedure): A working group, which is appointed by the Evaluation Committee and consists mainly of scientists from the fields which are relevant for the evaluated institution, |² is responsible for the expert assessment. After being adopted by the working group, the results of the scientific evaluation may no longer be amended during the subsequent stages of the procedure. The fact that a statement on the assessment and the

|² The term „institution“ includes here and in the following text also large strategic exceptional appropriation requests in the sense of the Execution Agreement of the Leibniz Association.

future of the institution is not included in the assignment of the working group but is reserved to the Evaluation Committee and the Council must be clearly imparted to the members prior to the commencement of the evaluation procedure. If the chair of the respective working group is not a member of the Evaluation Committee or the Council, he or she will be invited to the subsequent deliberations and will make himself/herself available for explanations and queries. The Evaluation Committee will draw up the science policy statement on the basis of the scientific Evaluation Report, will accord due consideration to cross-cutting and comparative points of view insofar as necessary and useful and will prepare a summary of what it considers to be the most important recommendations. Strong justification will need to be provided if the recommendation of the Evaluation Committee including reasons given tends to diverge from the scientific evaluation of the working group.

In accordance with the principle of the separation of scientific evaluation and the science policy statement, the non-amendable evaluation report and the draft version of the science policy statement will be submitted to the German Council of Science and Humanities for the purpose of consultation and adoption. The statement adopted by the German Council of Science and Humanities including the evaluation report will be published.

III. AIMS OF THE EVALUATION

The aims of the evaluation of scientific institutions are to identify strengths and weaknesses and to provide recommendations as to how weaknesses can be eliminated and strengths promoted so as to increase the performance of an institution in overall terms and to improve the quality of research and teaching and of scientific and consultancy services where relevant. In the event of insufficient scientific research performance, the Council also reserves the right to recommend termination of funding of the institution. This particularly applies in the case of such institutions where appraisals in the past already identified serious deficits and/or where previous recommendations have not been implemented or have been insufficiently implemented.

The funding recommendation should as a rule be phrased in a way which generally leaves the science policy decision concerning the continuation of the funding to the state (*Land*) or Federal Government but points out in critical cases that the implementation of the Council's recommendations should be the prerequisite for further funding. Evaluations of scientific institutions carried out by the German Council of Science and Humanities must in all cases be without prejudice to the outcome. If there is reasonable doubt concerning the openness of the outcome, evaluations may be rejected, interrupted or discontinued depending on the status of the procedure.

IV. PROCEDURE OF THE EVALUATION COMMITTEE

General procedural principles have been developed below on the basis of the experience gained by the German Council of Science and Humanities in the evaluation of scientific institutions. These procedural principles should be viewed as benchmarks only. Details will need to be monitored on an ongoing basis within the evaluation process and possibly be redefined.

The Evaluation Committee deals solely with institutions with a proven claim on science/research in their assignment and which are of significant science policy impact. It reserves the right to provide a recommendation on the acceptance or rejection of an evaluation assignment to the Council.

Requests made by the Federal Government and/or the *Länder* for evaluation of a scientific institution will be checked upon receipt in the Head Office by the Chairperson of the Evaluation Committee and by the Secretary General of the Council with the involvement of a specialist representative where necessary. In straightforward cases, acceptance will be recommended to the Council and the Evaluation Committee. In problematic cases, the application will be submitted to the Evaluation Committee for the purpose of consultation regarding a recommendation to the Council. A representative of the client/clients is invited to take part in that consultation. This procedure should always be used for applications from the Federal Government and/or *Länder* relating to the evaluation of concepts for the establishment of new scientific institutions. Within this context, the Evaluation Committee in each case initially stipulates one meeting to take place prior to two regular German Council of Science and Humanities meetings (January and July meetings). The Secretary General and the Head Office of the Council are available for consultations on evaluation assignments at any time.

Once instigated, an evaluation procedure should be concluded without interruption. Any deviation from this principle requires a compelling reason.

The evaluation report will not be published in the event that the evaluation procedure is discontinued due to withdrawal of the application. It will, however, be forwarded to the members of the Scientific Commission of the German Council of Science and Humanities marked “Personal and Confidential”. The applicant/applicants will be notified of the status of consultations. The Council will announce the withdrawal of the application in a standardised press release.

The Evaluation Committee primarily deals with institutional evaluations which concentrate on the services and performance of larger groups, departments and whole institutions and their significance within the national and international scientific community. The focus will generally be on performance in the last three to five years and on assessable performance gradients. The

quality of individual services or individual projects does not usually constitute a focus of attention for the evaluations carried out by the German Council of Science and Humanities.

The procedure of the German Council of Science and Humanities for institutional evaluations is essentially based on the method of qualitative evaluation by scientific peers and further experts. In order to carry out the scientific evaluation of an institution, the Evaluation Committee deploys a working group, which is normally led by a member of the Evaluation Committee.

V. CRITERIA OF THE EVALUATION

The working group decides in an internal discussion which criteria should be applied and which weighting should be applied to the criteria. The selection of the criteria depends on the self-definition of the respective institution, which normally involves a main focus e.g. on research, scientific services or scientifically-based consultancy. Different criteria need to be applied or the criteria need to be weighted differently for the evaluation of services or consultancy compared to the evaluation of research. Mixed criteria need to be applied if the self-definition of an institution encompasses both research and services and/or consultancy.

a) Evaluation of research performance

In evaluating research, the German Council of Science and Humanities places its main focus on the quality of scientific work. It uses qualitative as well as quantitative indicators in the assessment. In doing so, it acts on the assumption that quantity of research performance does not necessarily allow conclusions on their quality. |³

The criteria which are of particular significance and which are generally recognised also within the international context are listed below (the order of criteria does not constitute any ranking or prioritisation). A selection from the list of criteria should be made depending on the type and specific characteristics of the institute to be evaluated, e. g. a focus on theoretical or applied research.

Regarding the Research Programme

- _ Innovative approaches (particularly also including especially creative, risky and interdisciplinary projects)

|³ Cf. *Wissenschaftsrat: Recommendations on the Assessment and Management of Research Performance*, November 2011, p. 38f.

- _ Coherence of the research programme and conclusive formulation of main focuses of research
- _ Convincing medium-term perspectives for the scientific work of the institute
- _ Integration into the national and international research landscape

Regarding publications, conferences, patents, third-party funding and scientific awards

- _ Qualified publications; papers in refereed journals; in the case of institutions specialising in research in the humanities a ratio of monographs, papers in refereed journals and contributions to other journals and edited volumes which is convincing in consideration of the subject in which the institute specialises
- _ in the case of institutions specialising in engineering particularly also refereed conference papers and the quality rating of patents
- _ Invitations to researchers of the institute to give significant presentations at important national and international conferences
- _ Hosting of specialist conferences of national and international importance
- _ Successful acquisition of third-party funding, particularly funding awarded within the scope of extensive quality control procedures in consideration of institution-specific admission restrictions in certain funding programmes
- _ Scientific prizes, awards
- _ Referee functions etc.

The assessment of the quality of an institution's research performance should, if possible, be reinforced by reading selected publications. The Council will also make use of bibliometric indicators in suitable cases. In the case of structural investigations of a subject area, cross-sectional evaluations or system evaluations, bibliometric procedures such as analyses of publications and quotations may also be appropriate and useful. The Evaluation Committee will draw on the expertise of organisations with methodological competence in the compilation of bibliometric analyses.

Regarding quality control

- _ Regular internal quality control by a scientific advisory board or a similar institution via an internal audit, controlling or similar process
- _ Regular external quality control

Regarding cooperation agreements

- _ Cooperation with institutes of higher education and other research institutions in Germany and abroad

- _ Establishment and expansion of regional “clusters” and research networks
- _ Joint appointments of institute directors and other leading researchers together with institutes of higher education (in accordance with the different established models within this context)
- _ Contributions to higher education teaching by scientists of the institution
- _ Appointments of scientists at the institute to professorships at universities/colleges or to senior management positions at other research institutes
- _ Research visits by scientists of the institute to institutes abroad
- _ Research visits to the institute by scientists from Germany and abroad
- _ Appointment of scientists to committees with relevance to science or science policy
- _ Standing of the institution within the national and international research environment

Regarding commitment to the promotion of the new generation of academics

- _ Supervision of scientific qualification assignments of young academics within or outside the institute by scientists of the institute together with a university;
- _ Establishing graduate programmes in cooperation with universities (Graduate Colleges, Graduate Schools etc.);
- _ Availability of qualification posts and/or stipends for Ph.D. candidates and postdoctoral researchers;
- _ Reliable career perspective for young academics (cf. c) Organisation and Endowment), e. g. tenure track options;
- _ Junior research groups;
- _ Organisation of summer schools, colloquia or other events specifically for young scientists.

Regarding practical orientation

- _ Exploitation of research results (generated transfer), e. g. registration of intellectual property rights and patents
- _ Spin-offs
- _ Successful acquisition of funding for projects which are in line with the research programme of the institute

Regarding international orientation

The international orientation of an institute has to be taken into account as a cross-sectional dimension. In particular, international cooperation, publications, conferences and third-party funding can be considered to assess this dimension, as well as the share of young scientists and established researchers from abroad who work for an institute as guests or employees. Research visits of employees of an institute at scientific institutions abroad are also relevant.

b) Evaluation of infrastructure, services and consultancy

In order to be able to provide high-quality services for research or services within the field of scientifically-based consultancy, it is necessary for an institution to dedicate an appropriate proportion of its work to research. For this reason, the criteria for research also apply to institutes which provide a high proportion of service and/or consultancy tasks, although these criteria need to be adapted and supplemented as required. In addition to the criteria related to science, the following criteria may, for example, be applied in respect of the evaluation of services:

- _ (Further) development of research infrastructure and connected scientific methods by own research and development activities;
- _ Importance of the research infrastructure for scientific community/communities
- _ Accessibility of the research infrastructure for scientists of other institutions;
- _ Reception of the research results achieved via external use of the research infrastructure within the scientific community (relevance/impact);
- _ Establishing a research basis for service provision via the institute's own research and/or the development of current knowledge;
- _ User orientation and satisfaction of users; exploitation of existing utilisation potential; ongoing quality control of services via a users' board;
- _ Strategies for communication with users/the public;
- _ Transfer to practice, including ideas for implementation into products where appropriate;
- _ Ratio between effort/expenditure and results/products (efficiency);
- _ Evaluation of the institution in national and international comparative terms.

These criteria also apply to the evaluation of consultancy services, for which the following additional criteria are included:

- _ Establishing a research basis for consultancy and/or the development of current knowledge;
- _ Independence of the institute in its consultancy activities;
- _ Convincing strategy and transparent consultancy procedures;
- _ Acquisition of suitable target groups for the consultancy services.

One additional aspect which may be of significance from a scientific policy point of view is the singularity of the spectrum of tasks of an institute (unique selling point), although this in no case indicates anything regarding the efficiency of an institution with regard to primary service/consultancy tasks.

c) Evaluation of Organisation and Endowment

A suitable endowment with staff and funding as well as a sustainable institutional concept is necessary to fulfil the often very complex tasks of the institutes; the last point applies especially to institutes who aim at membership in the joint funding by Federal State and *Länder* in the context of the Execution Agreement of the Leibniz Association. In addition, scientific work and the provision of infrastructure, service and consultancy rely on flexible organisation and management structures.

Regarding internal governance

- _ Interaction of the different boards (Executive Board, Board of Trustees, Advisory Board etc.) in the fulfilment of tasks;
- _ Suitability of the governance structure with regard to the task;
- _ Weight and use of internal incentive systems (e. g. bonus systems);
- _ Organisational flexibility in the fulfilment of tasks (e. g. matrix structure, work on tasks in project form etc.);
- _ Controlling.

Regarding personnel structure and qualification

- _ Adequacy of staff number and structure with regard to the tasks of the institute (share of scientific and other personnel; balanced age structure)
- _ Quality assurance with regard to staff (public employment advertisements, recruitment of qualified personnel, e. g. procedures for the employment of executive management which are similar to the procedures for the appointment of university chairs; further training of staff);
- _ Balance between flexibility of human resources and reliability of careers for young scientists (temporary appointments to some institutional posts for academic researchers; sufficient number of temporary third-party funded em-

ployment contracts as a proportion of all scientific staff; reliable career perspectives for young scientists);

- _ Gender equality, especially in leadership positions; measures for the promotion of work-life-balance.

Regarding budget and infrastructure

- _ Adequacy of budget with regard to the tasks of the institute (proportion of institutional funding in comparison to other sources of funding, third-party funding, revenue etc.);
- _ Flexibility of budget management;
- _ Adequacy of infrastructure with regard to the tasks of the institute (e. g. premises, equipment, laboratories, easy access to scientific literature);
- _ Long-term usability of research infrastructure (maintenance, operation, accessibility, rules of access etc.);
- _ Coordination with other institutions in the acquisition of high grade hardware infrastructure; examination of shared use potential (e. g. with nearby universities).

VI. APPLICATIONS FOR JOINT FUNDING WITHIN THE LEIBNIZ ASSOCIATION

The German Council of Science and Humanities issues recommendations on the admittance of institutes to the Leibniz Association and on the extension of existing Leibniz institutes by “large strategic exceptional appropriation requests” on the request of the Federal Government and the *Länder* on the basis of § 1 III of the Execution Agreement of the Leibniz Association. These are based on a scientific evaluation of the applying institute or the strategic extension whose results are laid down in an expert assessment report.

The recommendations of the German Council of Science and Humanities appraise the scientific quality of an institution or a strategic extension, the supra-regional significance and the structural relevance for the whole science system. It includes the position of the Leibniz Association and encloses the recommendations of the Leibniz Association for the information of the Joint Science Conference (GWK). Beyond the expert assessment of each institute or extension, the Council uses the three dimensions mentioned above to rank the merit of the applications with regard to the joint funding by the Federal Government and the *Länder* in the following categories:

- _ Excellent
- _ Very good
- _ Good

_ Not sufficient.

The assessment of the scientific quality of an institute/a strategic extension is based on the evaluation criteria which are customarily used by the German Council of Science and Humanities (cf. V). The sufficient scientific quality of an institute or extension is a necessary prerequisite to determine the national interest in the funding from a science policy perspective. Further prerequisites concern the supra-regional significance and the structural relevance of the institute or extension for the science system. In doing so, it has to be ascertained that the research topics are important from a scientific and science policy perspective and cannot be explored at a university and that the integration within the Leibniz Association promises especially good chances for development and a substantial added value.

The Evaluation Committee prepares funding recommendations regarding the four quality categories on the basis of the expert assessment reports on the institutes or extensions and including the position of the Leibniz Association and refers these to the German Council of Science and Humanities for consultation and adoption. |⁴

VII. PRINCIPLES FOR SUCCESSFUL EVALUATIONS

The evaluation of scientific institutions by the German Council of Science and Humanities has shown that a few principles need to be taken into account and are important for the success or failure of evaluations. These particularly include the following:

- _ Transparency: the criteria and procedures including the names of experts must be known to all involved parties at the beginning of the evaluation. For this reason, the procedure should be explained to the institutions undergoing evaluation prior to the commencement of the evaluation (by the Head Office of the German Council of Science and Humanities).
- _ Participation: all parties involved in the procedure must be afforded an opportunity to participate to the greatest extent possible. This also particularly includes representatives of the funding bodies and, in the case of the institutions included in joint funding by the Federal Government and the *Länder* pursuant to Article 91bb of the German Constitution, the Head Office of the Science Conference (GWK). Representatives of the funding bodies should be

|⁴ "The German Council of Science and Humanities is asked to classify the applications beyond the assessment of each institute or extension with regard to these three criteria as well as on the whole according to the following prioritisations with regard to funding: excellent; very good; good; not sufficient". „Resolutions on the Implementation of the Execution Agreement of the Leibniz Association“ by the Committee of the Joint Science Conference from 28 April 2009 (last change on 7 April 2014), p. 10

accorded guest status, which excludes participation in final deliberations and votes.

Acceptance: evaluation procedures must be accepted by all parties as being appropriate and fair. This issue also includes that the institution undergoing evaluation accepts the presentation of facts, which forms the first part of the evaluation report, and that no amendments to that part of the report will be made during the further course of the procedure. It is international standard that institutions undergoing evaluation are given an opportunity to comment on the evaluation report during the procedure. If there should still be issues to be clarified after the visit of the working group to the institute, the institution undergoing evaluation should be given an official hearing by the Evaluation Committee (in writing or orally) if required. The evaluation reports should be submitted to the funding bodies of the institutions requesting a statement before the Evaluation Committee issues its recommendation.

Exploitation of expert potential: evaluation procedures stand and fall with the quality of the specialist experts involved. The potential number of highly reputable specialist experts is limited and the burden to which experts are subjected is great. For this reason, it is in some cases extremely difficult to acquire the best experts. Optimum exploitation of the potential pool of experts should include experienced scientists from abroad. If foreign experts are involved in the evaluation of scientific institutions, consideration should be given as to whether the conditions for evaluation can be improved by conducting consultations in English.

Avoidance of partiality: with regard to the composition of the evaluation groups, care should be taken that none of the experts has a relationship to the institution undergoing evaluation which could indicate partiality. This particularly includes (retrospectively for up to five years) former membership of the respective institution, advisory and supervisory activity for the institution, participation in appointment procedures, presence of a teacher-student relationship and membership of another institution in the *Land* where the institution in question has its seat. Staff of institutes which are part of the Leibniz Association may not be involved as experts in evaluation procedures for the acceptance of institutions into the joint funding programme of the Leibniz Association. Experts must distance themselves from participation in all cases of possible conflicts of interest.

Consideration of interdisciplinarity in the way in which institutes work: in the case of institutes which are strongly focused along interdisciplinary lines, disciplinary oriented peer review rapidly reaches its limits. This may be because there is an absence of the usual academic standards within a discipline or because experts from highly different disciplines do not achieve any agreement regarding standards. For this reason, in the evaluation of institutes which operate in an interdisciplinary manner the composition of the

working group should cover the broadest possible specialist orientation and interdisciplinary points of view during the consultations should be duly considered.

Consideration of different task profiles of institutions: According to the function of institutions, their task profile has a different focus in research, teaching, infrastructure, service and/or consultation etc. which has to be adequately taken into account when determining the quality requirements and selecting the experts.

Classification into the research field: classification within the national and, as far as possible, the international research field needs to be part of the overall appraisal of an institution. The specialist experts represented in the working group should provide relevant indications in this regard. The results of the Research Rating should be included, if applicable.

Non-intended effects of evaluations: non-intended effects may occur during evaluation procedures. Non-intended effects may include the overestimation of work which pursues the respective dominant trend within the relevant field and underestimation of inventive and innovative approaches which deviate from the trend. A general effect of frequent evaluations may be that scientists tend to align their work in evaluations more towards probabilities of success and less towards specialist scientific standards. For this reason, critical monitoring of criteria and procedural methods focusing on non-intended effects must be undertaken regularly.

Burden on the institution undergoing evaluation: the burden for institutes undergoing evaluation is usually high. Preparation in the form of responding to the questionnaire, collation of documentation and organisation of the visit to the institute are time-consuming and in most cases result at least temporarily in a strong reduction of research work. The ability of institutes to have recourse to audit documentation held internally when preparing for external evaluations assists in reducing the burden. Funding bodies and supporting organisations should act in a timely manner in providing “their” institutions with relevant advice. |⁵

Consideration of conditions for implementation: In implementing evaluations, it is often difficult to ensure that institutions which have received very good evaluations are rewarded in the form of additional resources. For this reason, the science policy statement should, in suitable cases, also include

|⁵ In doing so, the relevant recommendations of the German Council of Science and Humanities should be taken into account. Cf. German Council of Science and Humanities: *Empfehlungen zu einem Kerndatensatz Forschung* (Drs. 2855-13), Berlin 2013.

recommendations to funding bodies regarding the setting of relevant incentives.

VIII. FOLLOW-UP TO THE IMPLEMENTATION OF EVALUATION RECOMMENDATIONS OF THE GERMAN COUNCIL OF SCIENCE AND HUMANITIES

During consultation meetings held prior to evaluations, it should be pointed out that, following the conducting of an evaluation, the German Council of Science and Humanities expects to receive an Implementation Report from the funding body/bodies within an appropriate deadline, usually three years. |⁶ The science policy statement should also request the funding body/bodies to submit an implementation report regarding the recommendations to the German Council of Science and Humanities, usually after three years.

Based on the Implementation Report, the Evaluation Committee draws up a statement concerning the implementation of the recommendations so far, which is deliberated under a separate agenda item in the German Council of Science and Humanities. These deliberations inform a resolution adopted by the Council, which is published together with the Implementation Report. If the Implementation Report is unsatisfactory, the resolution adopted by the German Council of Science and Humanities will include the expectation that the funding body/bodies will be requested to undertake a re-evaluation of the institution in question.

|⁶ Principally exempt are evaluation procedures which lead to the inclusion of the evaluated institute in the joint funding by Federal Government and *Länder* in the frame of the Execution Agreement of the Leibniz Association because the Leibniz Association provides an independent regular evaluation procedure for these institutes.