



**Evaluation Handbook
for the Programme
Support for the establishment and operation
of Christian Doppler Laboratories**

ref.: BMWFJ-97.430/0021-C1/9/2013

Approved on 12.08.2013 by the Federal Ministry for Economy, Family and Youth

Contents

1.	Funding programme	4
2.	Evaluation and decision-making bodies	4
3.	Evaluation and decision-making criteria	5
3.1.	Criteria for assessing the scientific quality of an application	5
3.2.	Criteria for assessing the scientific qualifications of the Head of the Laboratory	6
4.	Procedure for evaluating applications for establishment of a CD Laboratory	6
4.1.	Submission of application	8
4.2.	Formal pre-check	8
4.3.	Assessment of the minimum criteria for the quality of the application and the qualifications of the Head of the Laboratory	9
4.4.	External review procedure (peer review)	9
4.5.	Hearing	11
5.	Procedure for evaluating applications for establishment of an International CD Laboratory	12
6.	Resubmissions	13
7.	Procedure for evaluating applications for establishment of an additional module or for extending the thematic scope of an existing module	13
8.	Procedure for evaluating applications for establishment of an additional International module ..	15
9.	Procedure for evaluating applications for Lectureships/Heads of Laboratory endowed by the CDG	16
10.	Executive Board decisions	16
11.	Scientific evaluations during the operation of CD Laboratories	17
11.1.	Scientific evaluation after two years	17
11.2.	Scientific evaluation after five years	19
11.3.	Final evaluation	19

Disclaimer

Every effort has been made to ensure the accuracy of this translation. Nevertheless, the Christian Doppler Research Association cannot assume responsibility for any errors that may inadvertently have occurred. In the event of any discrepancy, the German version is to be taken as valid. TRANSLATED 26.11.2013

Original document in German:

Bewertungshandbuch zum Programm „Förderung der Einrichtung und des Betriebs von Christian Doppler Labors“. GZ.: BMWFJ-97.430/0021-C1/9/2013. Genehmigt am 12.08.2013 vom Bundesministerium für Wirtschaft, Familie und Jugend.

In English:

Evaluation Handbook for the Programme. Support for the establishment and operation of Christian Doppler Laboratories. Ref.: BMWFJ-97.430/0021-C1/9/2013. Approved on 12.08.2013 by the Federal Ministry for Economy, Family and Youth.

1. Funding programme

The present Handbook sets out the guidelines from the Federal Minister for Economy, Family and Youth for the evaluation and decision-making processes involved in the programme “Support for the Establishment and Operation of Christian Doppler Laboratories”.

The legal basis for the Handbook is provided by § 15 FTFG together with Point 5.2.3 of the RTD Guidelines (ref. BMWA-97.005/0002-C1/9/2007 of 30.11.2007) and Point 7.6.1 of the Programme Document (ref. BMWFJ-97.430/0024-C1/9/2012 of 14.03.2013).

By means of the evaluation and decision-making processes, decisions on the immediate and legally binding disposition of State funding are taken. The Christian Doppler Research Association (CDG) acts through its boards that function as evaluation and decision-making bodies (Scientific Board and Executive Board) by order and for the account of the State.

Additional remarks from the CDG

The procedures set out herein for evaluation and the assessment of the extent to which the evaluation and decision-making criteria are met and for external evaluations are also valid for the establishment and operation of those laboratories that are supported by money from other funding sources (especially the National Foundation for Research, Technology and Development).

2. Evaluation and decision-making bodies

Decisions on the granting of support are taken in accordance with established procedures. To this end an evaluation body has been established that is responsible for undertaking the scientific assessment of applications. The CDG Scientific Board (*Senat*) is responsible for the evaluation of the Christian Doppler Laboratories (CD Laboratories) and of the Josef Ressel Centres (JR Centres). Within the Scientific Board, a distinct Commission (the CD Commission) functions as the evaluation board for CD Laboratories. The CD Commission takes its decisions with the scientific independence guaranteed by the funding programme. In certain cases, e.g. if information is missing, the CD Commission can empower its Chair to take decisions alone, providing these are in line with the conditions specified in delegating the decision. The CD Commission's decisions have the nature of justified recommendations for the funding decisions in question.

The CDG Executive Board is responsible for determining the size and composition of the CD Commission, as well as for specifying the CD Commission's rules and regulations.

Responsibility for funding decisions lies with the Federal Minister for Economy, Family and Youth. In the present programme the decision-making ability is transferred to the Executive Board of the Christian Doppler Research Association in accordance with § 16 para. 2 FTFG together with Point 5.2.4 of

the RTD Guidelines and Point 7.5.1 of the Programme Document. The Executive Board takes decisions on the granting of support by order and for the account of the State.

Any other consequences of the decisions of these boards, especially with regard to the boards' responsibilities within the Association, are unaffected by the present provisions.

3. Evaluation and decision-making criteria

The CDG is oriented in a strictly bottom-up manner and this principle is reflected in the composition of the CD Commission. The procedures laid out in the present Evaluation Handbook are thus to be applied to all disciplines to ensure equal treatment and transparency. Despite the equivalent nature of the procedures, the peculiarities of individual subject disciplines must be taken into account in the CD Commission's assessments. At the same time, the CD Commission is free to make further developments to the evaluation procedures presented herein. In cases that are unforeseen and thus not covered by the present provisions the CD Commission will endeavour to apply the most appropriate procedure in a manner that is consistent with the programme's aims and that ensures that the applicants are treated equally.

Assessment of whether an application warrants funding is based on two fundamental criteria:

- the scientific quality of the application;
- the scientific qualifications of the person foreseen to lead the Laboratory and her/his suitability for heading a research group.

3.1. Criteria for assessing the scientific quality of an application

The scientific quality of an application is assessed by means of the following criteria:

- Is the planned research project at a high level as judged by international standards?
- Are the goals clearly defined and attainable?
- Will the expected results contribute to advancing the state of basic research in the scientific discipline?
- Does the planned research contain or would it enable technical innovation?
- Is the theoretical background adequately described?
- Is the proposed methodology likely to lead to success?
- Are any aspects of diversity relevant to the proposed research and if so have they been taken into account appropriately?
- Are the planned resources sufficient and well focussed?
- How suitable is the planned form of collaboration?
- What is the level of economic or public interest in the research proposal?

3.2. Criteria for assessing the scientific qualifications of the Head of the Laboratory

The assessment of the scientific qualifications of the Head of the Laboratory is based on the following criteria:

- How high is the international scientific standing (based in particular on publication activity)?
- Does the future Head of the Laboratory have sufficient knowledge of the scientific discipline (in particular, does she or he have a *Habilitation* in a relevant discipline, is she or he working towards a *Habilitation*, or does she or he have comparable qualifications)?
- Does the Head of the Laboratory have experience leading scientific projects (e.g. projects funded by the FWF)?
- Is she or he suitable to head a group of scientists?
- Does she or he have an appropriate position in the organizational structure of the university/non-university research association and is she or he sufficiently well integrated in the university/non-university research association?
- Are there any personal or organizational factors that could hinder the operation of a CD Laboratory?

4. Procedure for evaluating applications for establishment of a CD Laboratory

The CDG offers information and individual advice in advance of the (formal) submission of an application and as early as the draft phase. The details of the procedure for examining an application and assessing whether it meets the evaluation and decision-making criteria are presented schematically in figure 1.

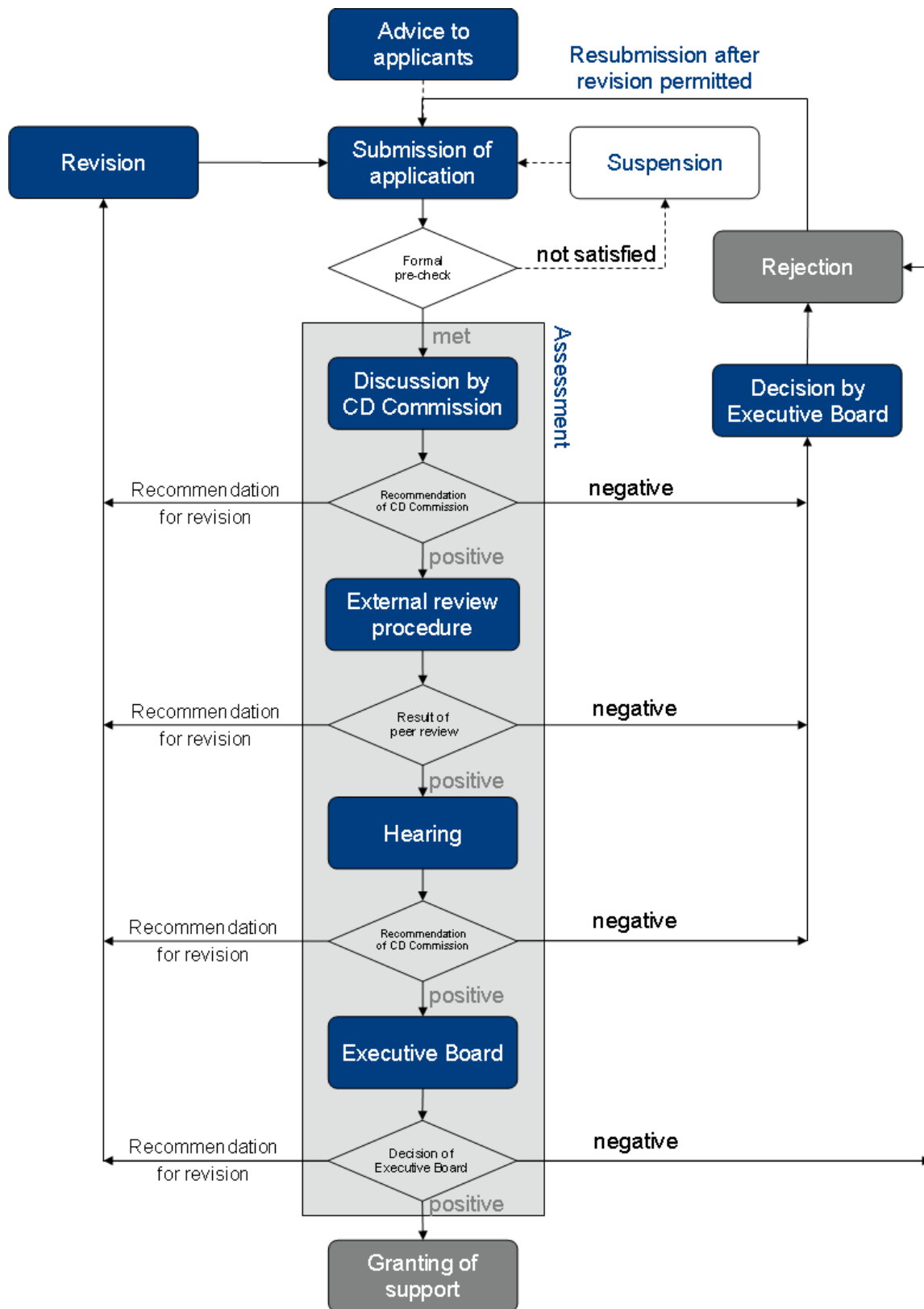


Figure 1: procedure for examining and assessment of an application for establishment of a CD Laboratory

4.1. Submission of application

Applications must be submitted in writing to the CDG in accordance with the guidelines for establishing a CD Laboratory. Applications for funding may be submitted at any time; there are no special calls for applications.

As stipulated in Point 7.2.1 of the Programme Document, applications must be submitted in written form and in accordance with the guidelines, in English. The following represent the minimum requirements:

- a detailed description of the research project (state of the art, approaches to solving problems, planned work, further development of fundamental knowledge);
- research plan, time plan and cost plan (in detail for the first two years of research and indicative for the following three years);
- information on the available infrastructure (premises, equipment) that is intended for use by the CD Laboratory (or by the separate module of a CD Laboratory);
- information on the commercial partners who are collaborating;
- documents relating to the intended Head of the Laboratory that permit an assessment of her/his scientific qualifications;
- proof that the intended Head of the Laboratory is permitted to represent her/his organization (or an appropriate declaration of consent from the university or non-university research institution);
- the commercial partners that are collaborating must already be members of the CDG or must have requested membership and must accept the rights and duties of commercial partners with regard to the CD Laboratory in question.

An applicant may withdraw her or his application at any stage of the procedure. If an application is revised, the guidelines for establishing a CD Laboratory specify that attention should be drawn to any changes compared with the initial application (cf. Point 6).

4.2. Formal pre-check

Applications are subjected to a formal check by the organization that administers the programme (the CDG Secretariat) and if this is positive they are forwarded to the CD Commission for a check of the contents. As part of the formal pre-check, the documents relating to the commercial partner(s) will be checked for completeness. If one of the commercial partners is not a member of the CDG, the company in question may submit an application for CDG membership as part of the application for a CD Laboratory. In this context, the guidelines for the establishment of a CD Laboratory specify that the following additional documents must be submitted:

- application for regular membership of the Christian Doppler Research Association
- letter of commitment to participate in a Christian Doppler Laboratory

- if the company is an SME in accordance with the EU's definition: application for a reduced fee for membership of the Christian Doppler Research Association as a precondition for granting of SME support for the Christian Doppler Laboratory

Applications that are formally incomplete and those that do not correspond to the CDG's guidelines for application for a CD Laboratory will be returned to the applicants with a request for the missing information. If the required information is not provided within a reasonable period of time, processing of the application will be suspended and the application will not be subjected to review. A revised application that meets the formal criteria may be resubmitted. In case of doubt the CDG Executive Board will decide whether formal criteria have been met.

4.3. Assessment of the minimum criteria for the quality of the application and the qualifications of the Head of the Laboratory

The CD Commission of the CDG Scientific Board, the organ responsible for the evaluation, assesses whether the application warrants support. In an initial step the CD Commission determines whether the scientific content of the application satisfies the minimal criteria for quality and whether the scientific qualifications of the person planned to lead the Laboratory are appropriate. If necessary, the CD Commission may elect to seek advice from external persons, without prejudice to the procedures set out under Point 4.4. If the CD Commission determines that both the scientific quality of the application (at least with regard to the minimum criteria) and the scientific qualifications of the person planned to lead the Laboratory satisfy the criteria set by the CDG for CD Laboratories, the CD Commission will initiate the external review procedure set out under Point 4.4.

The CD Commission may decide:

- to initiate the external review procedure;
- to delay a decision to allow the application to be improved or reworked;
- to recommend not continuing with the evaluation because certain minimum criteria are not met (no reviews from external experts will be obtained).

4.4. External review procedure (peer review)

The CD Commission's final assessment takes into account reviews obtained from at least three external international experts (peer review, external review procedure). Under certain conditions (e.g. broad scientific themes etc.) more than three reviews might be taken into account. In exceptional cases a decision to proceed with a scientific hearing may be taken on the basis of fewer than three scientific reviews.

An applicant is free to include together with her or his application a list of persons her or she wishes to exclude from the review procedure because of competition or because of a fundamental difference of view. Justification must be provided for excluding certain persons and the list must be agreed with the commercial partner(s). The CDG undertakes not to contact any persons on the list. As a consequence of this procedure, it is not possible to submit objections to referees after their reports have been received.

Selection of referees is the responsibility of the Chair of the CD Commission and of one of her/his deputies, who may if necessary consult individual members of the CD Commission. For CD Laboratories to be established within Austria, only persons working outside Austria may be selected as referees. For CD Laboratories abroad, referees from within the same country will generally be avoided to ensure that such applications are treated equivalently. The referees who are ultimately selected are known only to the Chair of the CD Commission and to her/his deputies. Their identities are not revealed to any of the other members of the CD Commission, unless identifying them to individual members of the CD Commission is deemed helpful to enable these members to assess the relevance of the reports. The referees' reports are thus made available to the CD Commission without the names of the referees.

The procedure envisages transmission of the assessment criteria to the external referees in the form of a standard list of questions. Preparation of the list of questions is the responsibility of the Scientific Board and the list must be approved by the CD Commission.

The General Secretariat generally forwards excerpts of reviews obtained from the external referees to the applicant, without revealing the referees' identity, with a request to comment on them. In this way the CDG enables the applicant to respond to questions that may arise, to clarify points and to raise any concerns she or he may have. The applicant's responses to an excerpt are forwarded to the referee in question with the request for a final summary of her/his review.

To make the procedure transparent, if an application is rejected the reviews are forwarded to the applicant essentially in full, although without revealing the referees' identity. If an application is approved the applicant is entitled to examine the referees' reports, again without the referees' identity being revealed (the part of the reviews that the CDG has undertaken to treat confidentially will not be forwarded to the applicant, nor will it be made available for examination).

After a detailed discussion of the external reviews the CD Commission decides whether a scientific hearing should be organized. If the external experts' assessments are critical, the CD Commission may decide that the criteria of Point 3 have not been met and that there should not be a hearing. To accelerate the review procedure, the Chair of the CD Commission assesses the reviews and decides

whether to invite the applicant to a hearing. In taking the decision, she or he may consult individual members of the CD Commission.

The CD Commission may decide:

- to invite the applicants to a hearing before the CD Commission;
- to delay a decision to allow the application to be improved or reworked;
- to recommend the Scientific Board to reject the application.

4.5. Hearing

Hearings take place during meetings of the CD Commission. Apart from the applicant, a representative of the commercial partner(s) is invited to provide any information that may be required.

The main emphasis of a hearing is on

- describing of the scientific aim of the planned CD Laboratory, including presenting the current state of the art;
- presenting the research work planned and its scientific goals, including the methods and approaches and paying particular attention to progress expected in the underlying basic science;
- providing an overview of the planned modules and the structure of the planned CD Laboratory.

The hearing should also include:

- a presentation of the scientific curriculum of the applicant;
- a brief presentation of her or his previous work on the topic, including publications;
- a description of any collaboration partners;
- a description of the commercial partner(s), including their motivation for participating in the long term and their capacity for exploiting the results;
- information on the scientific environment of the Head of the Laboratory;
- an overview of the resources (especially personnel, investments, resources already available at the university or non-university research institution or at the commercial partners or to be supplied to them);
- a description of the research group's standing in an international context;
- indications of any interconnections with other projects, either already running or planned.

The presentation is followed by a detailed discussion with the applicant, during which questions may also be addressed to the commercial partner(s). There is then an extensive closed session of the CD Commission, at which the applicant and the commercial partner(s) are not present. Based on the external evaluation of the criteria given under Points 3.1 and 3.2 and on the assessment of the hearing, the CD Commission comes to a decision that represents its recommendation to the Executive Board.

The CD Commission may decide:

- to recommend funding, possibly with certain terms, conditions or recommendations;
- to recommend funding in the form of a CD Pilot Laboratory, possibly with certain terms, conditions or recommendations;
- to recommend the Scientific Board to reject the application;
- to delay a decision to allow the application to be improved or reworked.

5. Procedure for evaluating applications for establishment of an International CD Laboratory

The procedure to be followed is essentially the same as that applied to applications for CD Laboratories in Austria (cf. Point 4). However, in addition to the scientific aspects the assessment must also take the special preconditions for an International CD Laboratory into consideration:

- The scientific expertise necessary to work on the commercial partner's field is not available in Austria or is not available at the required level.
- The topic to be investigated is in Austria's economic interest or otherwise in the interest of the Austrian public.
- It can be plausibly shown that the project in question will lead to a particular benefit to Austria as a business location (e.g. by presenting the knowledge that is expected to be made available to local industry) and to the national scientific community (e.g. by planned collaborations with Austrian research institutions).
- The commercial partner will be able to derive sufficient benefit and to contribute sufficiently to the research in Austria.
- The university/non-university research institution is prepared to accept the legal provisions governing CD Laboratories and to grant access to the Austrian authorities entrusted with assessing the Laboratory's work or to persons who represent them.

The CD Commission may decide:

- to recommend funding, possibly with certain terms, conditions or recommendations;
- to recommend funding in the form of an International CD Pilot Laboratory, possibly with certain terms, conditions or recommendations;
- to recommend the Scientific Board to reject the application;
- to delay a decision to allow the application to be improved or reworked.

6. Resubmissions

In evaluating a resubmission of an application that has been returned to the applicant for revision, it is the general practice that the external referees include a mixture of new referees and referees who reviewed the rejected initial application. For this reason the applicant is required to provide an accompanying letter including a point by point summary of changes made. Particular attention should be drawn to changes made in response to the express wish of an external referee.

The CD Commission reserves the right to decide how often an application may be revised and resubmitted.

The procedure for evaluating a resubmission may deviate from the process described above for the evaluation of an application to establish a CD Laboratory or an International CD Laboratory (Point 4 or 5) if the CD Commission decides that the initial application satisfied individual criteria and no substantial changes have been made to the points assessed as satisfactory. Irrespective of the stage of the evaluation procedure when the CD Commission decides to delay a decision to allow the application to be improved or reworked and then resubmitted, individual stages of the evaluation procedure may be employed to establish whether the remaining criteria have been fulfilled.

As examples, it is possible to:

- request external referees to give their comments on changes to the application;
- invite the applicants to another hearing or to refrain from holding another hearing.

7. Procedure for evaluating applications for establishment of an additional module or for extending the thematic scope of an existing module

In accordance with the Handbook for the Operation of a CD Laboratory, applications for the establishment of an additional module must be submitted to the CDG in writing. Applications for support may be submitted at any time. The applicant must provide information relating to the following points (minimal requirements for the application):

- description of the contents of the research, in particular a description of where new scientific ground will be broken;
- research plan, time plan and cost plan (in detail for the first two years of research and indicative for the following three years);

- list of previous publications from the Head of the Laboratory or from the CD Laboratory staff responsible for the module that are relevant to the subject area in question, if this would be new for the CD Laboratory;
- brief description of the integration of the new module/the new topic in the CD Laboratory's overall concept and of the interactions with existing modules;
- information relating to the commercial partners that are collaborating, if they are not already participating in the CD Laboratory;
- staff of the new module/thematic extension (number, job descriptions for posts to be created, cvs of any future staff members who are already known);
- budget with confirmation from the commercial partner(s) (duly executed);
- if the university/non-university research association would have to make available additional infrastructure available or to make additional premises available to accommodate the new module/thematic extension, a declaration of consent from the university/non-university research association must be submitted;
- in the case of new modules that are to be established at a university/non-university research association other than the one where the CD Laboratory has been established, a declaration of consent of the new host university/non-university research association must be submitted and a separate Head of Module named. The qualifications of the Head of Module will be assessed on the basis of criteria comparable to those used for the evaluation of Heads of Laboratories.

Evaluation is undertaken by the CD Commission. If a new module is to be incorporated or a substantial thematic expansion is to be made to a CD Laboratory within its first year of operation, at least one international review is required. If the CD Commission should assess several additional modules at once or if the laboratory budget would increase by more than 50 % of the costs originally calculated, a further external referee's report is absolutely required before the CD Commission may make a recommendation to the Executive Board. In all other cases the CD Commission will decide whether an external review is necessary. To accelerate the procedure, the Chair of the CD Commission will take a decision before the meeting of the CD Commission on the necessity for an external review. Independently of the decision, the CD Commission may require an external review. A further hearing will generally not be held.

The CD Commission may decide:

- to recommend funding (possibly with certain terms, conditions or recommendations);
- to recommend the Executive Board to reject the application;
- to delay a decision to allow the application to be improved or reworked.

8. Procedure for evaluating applications for establishment of an additional International module

The procedure to be followed is essentially the same as that applied to applications for the establishment of an additional module in Austria (cf. Point 7). However, in addition to the scientific aspects the assessment must also take the special preconditions for an International module into consideration. There should be a Head of Module at the site where the module is to be established with particular responsibility for the module. The following regulations also apply to the relocation of an existing module within Austria to a location abroad.

In accordance with these requirements, the information listed under Point 7 is to be supplemented by the following:

- An explanation why the scientific expertise necessary to work on the topic of interest to the commercial partner is not available in Austria or is not available at the required level.
- A description why the topic to be investigated is in Austria's economic interest or otherwise in the interest of the Austrian public.
- A plausible explanation why the project in question will lead to a particular benefit to Austria as a business location (e.g. by presenting the knowledge that is expected to be made available to local industry) and/or to the national scientific community (e.g. by planned collaborations with Austrian research institutions).
- A declaration that the commercial partner will derive sufficient additional benefit and will devote sufficient support to research in Austria.
- A declaration that the university/non-university research institution is prepared to accept the legal provisions governing CD Laboratories and to grant access to the Austrian authorities entrusted with assessing the Laboratory's work or to persons who represent them.

The CD Commission may decide:

- to recommend funding (possibly with certain terms, conditions or recommendations);
- to recommend the Executive Board to reject the application;
- to delay a decision to allow the application to be improved or reworked.

9. Procedure for evaluating applications for Lectureships/Heads of Laboratory endowed by the CDG

It is generally assumed that the Head of the Laboratory has a valid contract of employment with the funding recipient and that her or his personnel costs are not included along the Laboratory's eligible costs. To compensate for the fact that these conditions may not be met in exceptional cases, especially when female scientists are considered as possible Heads of laboratories, it is possible for personnel costs to be covered by means of a so-called "Lectureship endowed by the CDG", should the lack of such a contract represent the only objection against granting support for establishment of a CD Laboratory. Should the Head of Laboratory in question not have completed a *Habilitation* (professorial qualification), the title of "Lecturer endowed by the CDG" should be replaced by "Head of Laboratory endowed by the CDG".

An application for an endowed Lectureship/Head of Laboratory must be placed in writing in conjunction with an application for a CD Laboratory. The evaluation is undertaken as part of the assessment of the application for the CD Laboratory in question. Applications for funding an endowed Lectureship are assessed in accordance with the criteria listed under Point 3.2. Particular attention is to be paid to the Head of the Laboratory's position within the organization.

The CD Commission may decide:

- to recommend funding (possibly with certain terms, conditions or recommendations);
- to recommend the Executive Board to reject the application;
- to delay a decision to allow the application to be improved or reworked.

10. Executive Board decisions

Executive Board decisions relating to the procedures regulated herein are taken by simple majority and require the agreement of the representative of the Federal Ministry for Economy, Family and Youth on the Executive Board (the funding agency has a veto right). Decisions are based on the recommendations of the CD Commission and on criteria relating to the conformance with legal requirements for funding and to scientific and political expediency. The commercial partners must have submitted applications for CDG membership or already be members of the Association. The CDG reserves the right to obtain an excerpt from the commercial register or from the Credit Association (*Kreditschutzverband*) to assess the company's financial strength.

The Executive Board may decide:

- to award funding (possibly with certain terms, conditions or recommendations);
- to award funding for a CD Pilot Laboratory, possibly with certain terms, conditions or recommendations;
- to grant a Lectureship/Head of Laboratory endowed by the CDG;
- to return the application for reconsideration by the CD Commission;
- to reject the application.

The applicant or the Head of the CD Laboratory will in all cases be informed of the Executive Board's decisions in writing. To ensure that the reasons for the CDG's decisions may be understood, if an application is rejected the reasons for doing so will be given.

11. Scientific evaluations during the operation of CD Laboratories

To guarantee the scientific quality and to test the extent to which the goals have been reached the CDG performs scientific evaluations of the CD Laboratories that are in operation under the guidance of international referees. Compulsory scientific evaluations are foreseen at least before the end of the second and the fifth years of each CD Laboratory's operation. In the case of CD Pilot Laboratories and in particular cases the CD Commission may advance the timing of the evaluation. Under certain circumstances the CD Commission may also undertake the evaluation of a CD Laboratory at a later time or may order an additional evaluation.

11.1. Scientific evaluation after two years

The CDG foresees a scientific evaluation of each CD Laboratory at the end of the introductory phase (before the end of the second year of research). If the result of this evaluation is positive, the duration of the CD Laboratory will be extended by three years (the first phase of extension) unless there are particular grounds for doing otherwise. The primary goal of the evaluation is to assess the progress of the basic research.

The evaluation after two years takes the form of an evaluation hearing at the university/non-university research institution in question and in the presence of at least one international referee. The referees assess the scientific progress and records the results in a standard manner (e.g. answers to a list of questions), taking any particular characteristics of the research discipline into account.

The Chair of the CD Commission is responsible for selecting referees and may make her/his selection following consultation with individual members of the CD Commission. In the case of CD Laboratories within Austria only persons working outside Austria may be selected as referees. For CD Laboratories

abroad, referees from within the same country will generally be avoided to ensure that such Laboratories are treated equivalently. As with applications, Heads of Laboratories may include a list of persons they wish to exclude from the review procedure because of competition with them or because of a fundamental difference of view. Justification must be provided for excluding certain persons and the list must be agreed with the commercial partner(s). The CDG undertakes not to contact any persons on the list.

The quality of the CD Laboratory is assessed by means of the following criteria:

- Is the research at a high level as judged by international standards?
- Is basic research being carried out in an appropriate manner?
- Have there been any deviations from the original research plan, time plan and financial plan and if so are they justified?
- Have any terms and conditions imposed when the funding decision was taken been observed and have any recommendations made at that time been taken into account?
- How has the publication activity been, in terms of quality and quantity, in relation to the international level in the discipline?
- Are there relevant scientific collaborations and if so how can these be assessed?
- Are appropriate measures in place to ensure knowledge transfer to the industrial partner?
- Is the necessary attention being paid to training and supervising young scientists?
- How can the research programme for the subsequent funding period be assessed in relation to the results obtained thus far?

In accordance with the Handbook for the Operation of a CD Laboratory, for the evaluation after two years the Heads of the Laboratory must submit an evaluation report and present it verbally during the hearing (presentation of the research results). On the basis of the evaluation report and the evaluation hearing, the referee will prepare a written review for presentation to the CD Commission.

The CD Commission will base its recommendations on:

- the evaluation report;
- the evaluation hearing;
- the referee's review;
- the research plan, time plan and cost plan to be submitted by the Head of the Laboratory (in detail for the third and fourth years of research and indicative for the fifth, sixth and seventh years).

In the case of a CD Pilot Laboratory, attention should be paid to the particular reasons that led to the choice of this form of support.

11.2. Scientific evaluation after five years

The evaluation at the end of the first phase of extension (before the end of the fifth year of research) will take place in accordance with the guidelines for the evaluation after two years, taking into account the progress expected after five years of research. If the result of this evaluation is positive, the duration of the CD Laboratory will be extended by two years (the second phase of extension) unless there are particular grounds for doing otherwise.

Following an interim evaluation the CD Commission may decide:

- to recommend extension of the CD Laboratory, possibly with certain terms, conditions or recommendations;
- to recommend converting a CD Pilot Laboratory to a normal CD Laboratory in the first phase of extension, possibly with certain terms, conditions or recommendations;
- to appoint a fresh external referee;
- to recommend rejecting the request for extension of the CD Laboratory but granting funding for a phasing-out period;
- to recommend rejecting the request for extension of the CD Laboratory.

The Executive Board will take its decision on extending support under analogous conditions to those applied to decisions on initial applications. A positive decision can only be taken with the vote of the representative of the Federal Ministry for Economy, Family and Youth on the Executive Board (the funding agency has a veto right).

Following an interim evaluation the Executive Board may decide:

- to extend the CD Laboratory, possibly with certain terms, conditions or recommendations;
- to convert a CD Pilot Laboratory to a normal CD Laboratory in the first phase of extension, possibly with certain terms, conditions or recommendations;
- to delay a decision to permit a reconsideration by the CD Commission;
- not to extend the CD Laboratory but to grant funding for a phasing-out period;
- not to extend the CD Laboratory;

The funding recipient (i.e. the university or non-university research institution) will be informed of the Executive Board's decision in writing. If an application is rejected the main reasons for doing so will be given.

11.3. Final evaluation

A final evaluation is to be performed at the end of each individual CD Laboratory with the aim of analysing the Laboratory's contribution to the programme goals. The Laboratory's impacts on the

academic area, the commercial partners, the national innovation system and the support of young scientists will be taken into consideration. The final evaluation comprises the collection of the required data, generally in the form of a questionnaire completed by the Head of the Laboratory and returned to the CDG after closure of the CD Laboratory. In addition, a comprehensive final report must be submitted, describing the scientific work undertaken in the second phase of extension.