



# **Programme Document 2019**

## **Support for the Establishment and Operation of Christian Doppler Laboratories**

**Programme Document**  
in accordance with Point 4.1 of the 2015 Structure RTI Guidelines  
for the Christian Doppler Research Association

ref.: BMDW-97.430/0018-C1/9/2018

Approved on 16.4.2019

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### 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 9.10.2019

### Original document in German:

Programmdokument 2019 zur Förderung der Einrichtung und des Betriebs von Christian Doppler Labors. Programmdokument gemäß Punkt 4.1. der Struktur-FTI-Richtlinie 2015 für die Christian Doppler Forschungsgesellschaft. GZ.: BMDW-97.430/0018-C1/9/2018, genehmigt am 16.4.2019.

### In English:

Programme Document 2019. Support for the Establishment and Operation of Christian Doppler Laboratories. Programme Document in accordance with Point 4.1. of the 2015 Structure RTI Guidelines for the Christian Doppler Research Association. Ref.: BMDW-97.430/0018-C1/9/2018, approved on 16.4.2019.

## 0. Preamble

The research funding programme “Support for the Establishment and Operation of Christian Doppler Laboratories” is administered by the Christian Doppler Association (CDG) and focuses on promoting research collaborations between universities or non-university research institutions and companies. The programme is addressed at application-oriented basic research, which is interpreted as research to create the scientific basis for resolving issues faced by the commercial partners. The researchers enjoy scientific autonomy in their work.

Collaboration with company partners should serve to bring fresh impulses into research and to advance research in the relevant fields, both qualitatively and quantitatively. The programme is intended to contribute to a strengthening of Austria’s potential for innovation and its international competitiveness.

The CDG has been in existence since 1988, when it was established, initially under the name *Christian Doppler Gesellschaft* (Christian Doppler Association), within the framework of the ÖIAG as an institution for promoting research. In 1993 the ÖIAG was reorganized from an industrial concern to an agency for participation and privatization, thereby necessitating a structural and conceptual reform to the CDG. A new basis for funding was created in 1995 and the Association was restructured. At the same time, financial responsibility was transferred to the Federal Ministry responsible for economic affairs. From 1995 until 2007 the legal basis for funding was provided by the Research Organization Act (*Forschungsorganisationsgesetz*, FOG). From 2008 the payment of support has been governed by the Research and Technology Promotion Act (*Forschungs- und Technologieförderungsgesetz*, FTFG).

The CDG’s particular structural characteristics include

- its support from companies that perform research,
- its autonomy in all scientific matters,
- its flexible and adaptable structure and
- its longstanding experience in the culture of collaboration between science and industry.

The CDG’s funding model has developed into an internationally recognized model of public-private partnership (PPP) in the Austrian research environment, in which above all the chosen legal form of a non-profit making organization (*Verein*) has proven itself over time to be a flexible element worth retaining.

Despite its name, the Christian Doppler Research Association is not a true research association, i.e. it does not have its own research staff. It is not a recipient of the programme’s funding but rather the funding organization (management agency) in the sense of Point 7.1 of the 2015 Structure RTI Guidelines. The actual research takes place in Christian Doppler Laboratories (CD Laboratories) established at university or non-university research institutions. The formal funding recipients are the institutions that host the CD Laboratories, which are herein known as the Hosts.

The programme “Support for the Establishment and Operation of Christian Doppler Laboratories” should be seen as a contribution towards the goals of the government’s RTD strategy, which foresees a closer collaboration between companies and universities or universities of applied sciences, evidenced in a division of work in the setting of university research priorities. The level of cooperation of Austrian companies should be further increased and strategic collaborations between science and industry further strengthened. Well developed research infrastructure at universities, universities of applied sciences and non-university research institutions not only promotes first-class scientific research but also represents the basis for successful collaborations between science, industry and society at large.

The CDG has always enjoyed a pioneer role in the cooperation between science and industry. It developed the first programme to bridge research by companies and academia and went on to become the model for the early programmes to establish Centres of Excellence. At the same time, its main aim from the very start has been to couple scientific excellence with strict criteria for scientific assessment. The Federal Ministry of Digital and Economic Affairs (BMDW) has emphasized the importance of cooperation between science and industry in ensuring that Austria remains an attractive location for business and for research. It sees the CDG and the programme run by the Association as a cornerstone of the national system for scientific innovation and a type of research funding that should be expanded. In March 2011 the Austrian government approved a strategy for research, technology and innovation that contained the explicit provision for “the further development ... of models for basic research addressed at particular topics (such as the CDG).” The present Programme Document represents the implementation of this measure.

The 2019 Programme Document governs the support for CD Laboratories. The Programme Document is based on the Research and Technology Promotion Act (FTFG). The 2008 Programme Document saw the legal basis switched from the Research Organization Act to the Research and Technology Promotion Act (FTFG) and made support for the CD Laboratories subject to the “Guidelines for the promotion of technical research by the private sector and of technological development” (RTD Guidelines). As a result, support was governed by § 15 FTFG, which was notified to the EU and promulgated on 7.12.2007 by the Federal Minister for Economy and Labour. In switching the legal basis, every effort was made to ensure continuity with the previous research. The “Guidelines for the promotion of scientific-technological research, technology development and innovation” (2015 RTI Guidelines: the Structure RTI Guidelines) came into force on 1.1.2015, replacing the 2007 RTD Guidelines.

The BMDW acts as public funding authority, the CDG is the funding agency responsible for managerial and administrative aspects; the universities and non-university research institutions are the funding recipients. In 2016 the Christian Doppler Laboratory and Josef Ressel Centre programmes were jointly evaluated and the results have been incorporated in the present programme. In addition, the system of goals and indicators has been further developed to reflect the demands of effective financial management.

## 1. Aims of the programme

### 1.1. Economic and sociopolitical goals

Within the overarching goal of all RTI funding programmes (RTD Guidelines Point 3.1.2 of the 2015 Structure RTI Guidelines) – stimulating increased research, technology and innovation activity by companies, e.g. by interactions with scientists, universities, non-university research institutions and universities of applied sciences – the following economic and sociopolitical goals are pursued:

- strengthening of application-oriented basic research;
- strengthening of Austria as a business location (i.e. companies' innovative power and competitiveness);
- strengthening of universities and non-university research institutions;
- structural improvement of the national system for scientific innovation;
- promotion of young scientists.

In line with these goals, the following points are characteristic of the programme and receive special attention:

- (1) the strengthening takes place through concrete collaborations between one (or more) companies and universities or non-university research institutions;
- (2) in these collaborations the focus is on application-oriented basic research;
- (3) collaborations are planned for periods that are long in the business context;
- (4) cooperation represents a goal in itself and is not subject to thematic restrictions or limitations from the funding organization (*bottom-up principle*);
- (5) support is provided for the establishment of small or mid-sized research groups (ca 3-20 persons) for a limited period of time to work on a research topic derived from the company partner's practical experience.

### 1.2. Operational goals

The following list of precise goals has been prepared to assist an effect-oriented budget management. It is intended to make the goals more concrete and to connect them to indicators for assessing whether they have been reached (cf. Point 11). The programme addresses the following operational goals:

- Duration and intensity of collaboration  
The programme should provide an incentive for companies undertaking research not to outsource it in the short term but to improve their own research performance by long-term collaboration with universities or non-university research institutions, in effect leading to a networking of research expertise. The long-term nature of the collaboration, involving commitment to a research topic and to a collaboration partner for up to seven years, is a prerequisite for sustainability of the results. Innovation is increasingly in need of research with a "longer half-life".

- **Generation of results from basic research at a high level**  
The programme is directed at research that is addressed at solving precise problems and particularly at the further development of the underlying basic science. For this reason, a CD Laboratory is fully dedicated to application-oriented basic research. The aims are particularly served by the Head of the Laboratory's scientific freedom in allocating 30% of the resources. In principal, the bulk of the research (70%) differs only in its close proximity to the companies' key questions, not in its goal of further developing the scientific basis in the relevant field. Experimental development is not an object of the programme.
- **Research relevant to practice**  
The anticipated results of the basic research relate to practical questions faced by the companies with which the Laboratory is collaborating. The selected research themes are derived from particular problems faced by companies in a competitive environment. The issues must to a large extent be such that they cannot be solved by the mere application of existing knowledge.
- **Technological leverage**  
The aim is to perform research not only to give rise to results that are to be made widely available (through publications) but also to produce results of technological relevance that may be applied in the company.
- **Knowledge transfer**  
A further aim is the exchange of technologically relevant knowledge in both directions. In addition to classical knowledge transfer from science to the private sector it is important to transfer know-how from the company to universities and research institutions, in particular relating to an improved understanding of company research culture.
- **Development of human resources**  
The aim is to improve the training and career possibilities for young scientists in relation both to an academic career and to making scientific personnel available to the private sector. Support for teaching at universities should be a further indirect result (through Master's/diploma theses, doctoral theses with topics close to practical cases, professorial qualifications and the mediation of contacts to companies).
- **Improved international contacts**  
An additional goal is the establishment of international research partnerships, in particular within the European Research Area. To this aim, companies outside Austria may participate in CD Laboratories. Under certain circumstances, CD Laboratories (cf. Point 4.3) or individual modules (cf. Point 4.4) may be established outside Austria. By the build-up of such transnational structures the Austrian companies should gain substantial know-how and their international networking should be significantly improved. Furthermore, Austrian scientists should be better able to orient themselves to the worldwide level of knowledge in the field.  
  
In addition, the CDG funding model should benefit from increased international visibility and its status as best practice in the international research scene should be further consolidated.

### **1.3. Distinction from other programmes (in accordance with 4.1.1 of the 2015 Structure RTI Guidelines)**

Both CDG funding programmes have unique structural features that distinguish them from other research programmes because of the specific combination of high demands on scientific quality (including the scientific freedom granted to the Heads of Laboratories), longer-term research collaborations and the direct integration of compact CDG research groups in the existing structures of the host institutions. In addition, governance decisions and the administration of the CDG model are accompanied by a regular and active dialogue with stakeholders, in a manner that is unique in the Austrian RTI system.

In addition to its practical benefits, the combined evaluation of the CD Laboratory and JR Centre programmes in 2016 served as a clear confirmation of the independent and specific alignment of the CDG funding model for CD Laboratories and JR Centres. “In terms of research policy, the CDG’s programmes occupy an institutionalized funding niche that is highly successful precisely because of its distinction from other funding programmes. The (thematic) openness of the programmes – which already contributes significantly to their success – will continue to be important and should remain in the focus, in addition to the high demands on scientific quality.” (2016 Joint Programme Evaluation of the CD Laboratories and JR Centres, Policy Paper, p. 17)

## **2. Legal basis**

- Research and Technology Promotion Act (FTFG)
- Guideline for the promotion of technical research by the private sector, of technological development and of innovation (2015 RTI Guidelines: Structure RTI Guidelines) in accordance with § 15 FTFG, 1.1.2015 (or, when these guidelines expire on 31.5.2021, the sets of guidelines that come into force to replace them)
- Union Framework for governmental support to promote research, development and innovation (2014/C 198/01) of 27.6.2014), which applies to specific aspects of the RTI support, such as eligible costs and the distinction between commercial and non-commercial activities of research institutions

The provisions of the 2015 Structure RTI Guidelines are to be applied in a subsidiary manner when the Programme Document does not include more detailed provisions.

## **3. Duration**

The duration of the programme is from 01.01.2019 until 31.12.2023.

## 4. Types of project that may be funded

The following types of project are distinguished in the programme:

- Christian Doppler Laboratory (CD Laboratory), including any external modules (Point 4.1)
- Christian Doppler Pilot Laboratory (CD Pilot Laboratory) (Point 4.2)
- International CD Laboratory (Point 4.3)
- International module of a CD Laboratory (Point 4.4)
- Collaboration with non-Austrian company partners in a CD Laboratory (Point 4.5)

The fourth and five bullet points do not relate to distinct types of project but expand CD Laboratories by the inclusion of collaborations beyond the national border.

### 4.1. Christian Doppler Laboratory (CD Laboratory)

CD Laboratories represent the main form of individual initiative to receive support. They are operative research units established at Austrian universities or extra-university research institutes for the purpose of reaching the goals of the funding programme. The private-sector partners may be Austrian companies or foreign companies.

Duration	7 years: 2-year introductory phase 3-year first phase of extension 2-year second phase of extension
Min. annual budget	EUR 140.000
Max. annual budget	EUR 750.000
Financing from public purse	50 % of eligible costs 60% if SMEs are involved (in proportion to involvement)
Nature of research	Application-oriented basic research with 30 % scientific freedom
Allocation of research in accordance with assistance and funding legislation	≥ 30% basic research ≤ 70% industrial research 0% experimental development

#### 4.1.1. Principle of the laboratory unit

Irrespective of the precise nature of their financing, CD Laboratories form a unit throughout the various contractual phases.

#### 4.1.2. Project contents (responsibilities of the CD Laboratory)

CD Laboratories are made up of small to medium-sized research groups (ca 3-20 persons) under the leadership of highly qualified scientists who work at a university/research institution to produce results on questions raised by the commercial cooperation partner. The emphasis should be placed on application-oriented basic research (in the sense of Point 5.1 of the 2015

Structure RTI Guidelines: projects categorized as “basic research” as an extension to projects in scientific and technical research and technological development). The goal of producing results by high quality basic research to advance the relevant scientific field is particularly relevant to the “30 % scientific freedom” that is granted in the CD Laboratories’ research programme. The results of this basic research should be published in an appropriate way. The other research results should be published without undue delay and in a manner that takes account of the industrial partner’s commercial interests (e.g. in patenting).

#### **4.1.3. Project structure**

A CD Laboratory may be subdivided for scientific, personnel, thematic, topical or organizational reasons.

The existence of an external or international module necessitates an organizational subdivision. An external module is part of a CD Laboratory located at a different university/research institution in Austria from the one hosting the Laboratory; an international module is part of a CD Laboratory located at a different university/research institution outside Austria from the one hosting the Laboratory. The duration of an external module or an international module is limited to the date of conclusion of the CD Laboratory.

Structuring of a CD Laboratory represents a flexible and variable form of organizing the work. It makes it easy to make changes while the CD Laboratory is running, such as extending, amending or reducing the scope of the work, including new commercial partners or parting company with existing partners or discontinuing an external module or an international module. Such changes are to be treated formally as alterations to the funding contract (cf. Points 4.1.6 and 9.4) and require the agreement of the appropriate organs of the CDG.

#### **4.1.4. Head of Laboratory**

It is envisioned that each CD Laboratory will be led by a single Head of Laboratory. Ideally, the Head of the Laboratory will be at an early stage of his or her scientific career but will already have, or anticipates soon completing, his or her professorial qualifications (“Habilitation”). In particular cases, which require justification, two persons may perform the function jointly. A person may only head one CD Laboratories.

The Head of Laboratory must be in possession of a valid contract of employment with the funding recipient. To ensure that the partners collaborating in the CD Laboratory remain independent from one another, no forms of interdependency with the commercial partners are permitted. In particular, it is not permitted for the Head of the Laboratory to be employed even part-time by a commercial partner, nor may she or he be otherwise in a position to exert an influence on the company management or to have a substantial commercial stake in the company.

The funding recipient must ensure that there are appropriate measures in place to enable the Head of the Laboratory to conclude legal contracts on behalf of the funding recipient (if the 2002 Universities Act is applicable, in accordance with § 28 together with the responsibilities arising from funding in relation to § 27 para. 1 point 2).

The Head of the Laboratory receives an honorarium at a level set by the CDG Executive Board (cf. Point 5.3.1 in relation to the honorarium for Heads of Laboratories) for leading the Laboratory.

A change to the Head of Laboratory requires agreement from the funding agency following the recommendation of the appropriate evaluation committee.

#### **4.1.5. Integration in the organization of the funding recipient**

The basis for the establishment of a CD Laboratory is a precise agreement between the funding recipient and the CDG (cf. Point 9.1.3). Support from the public purse for the establishment and running of a CD Laboratory by the funding recipient is regulated by the individual Funding Contract (cf. Point 9.1.4).

In this Contract, the funding recipient must undertake to incorporate the CD Laboratory, which is under the responsibility of the Head of the Laboratory, into its organization in an appropriate manner. In doing so, it must ensure the operational independence of the Head of the Laboratory.

Unless otherwise specified in the following sections (in particular Point 5.3), the funding recipient's infrastructure is available to the CD Laboratory to the extent necessary for the Laboratory to meet its responsibilities and without incurring additional charges.

#### **4.1.6. Changes to an existing CD Laboratory**

The organization of CD Laboratories is sufficiently flexible to permit changes to an existing CD Laboratory at any time. For example, Laboratories may extend, amend or reduce the scope of their work, include new commercial partners or part company with existing commercial partners or establish or discontinue an external module or an international module. Any amendments to the individual funding contracts resulting from such changes to a CD Laboratory are subject to the provisions of Point 9.4.

## **4.2. Christian Doppler Pilot Laboratory (CD Pilot Laboratory)**

Christian Doppler Pilot Laboratories represent a special form of the introductory phase of CD Laboratories. An application for establishment of a (regular) CD Laboratory (in accordance with Point 4.1) may be approved in this form if the primary reason for not approving establishment of a regular CD Laboratory is that the topic to be studied is associated with a high level of risk and/or there are doubts about the suitability of the Head of the Laboratory, although the possibility of her or his suitability cannot be completely excluded. In any event, there must be sufficient scientific value to the topic to be

studied and sufficient sociopolitical interest in research in the area to justify the establishment of a CD Laboratory.

Duration	2 years After which possible conversion to a regular CD Laboratory (in the stage of the first phase of extension)
Min. annual budget	EUR 140.000
Max. annual budget	EUR 650.000
Financing from public purse	50 % of eligible costs 60 % if SMEs are involved (in proportion to involvement)
Nature of research	Application-oriented basic research with 30 % scientific freedom
Allocation of research in accordance with assistance and funding legislation	≥ 30% basic research ≤ 70% industrial research 0% experimental development

Christian Doppler Pilot Laboratories are more closely monitored by the CDG. There are no differences from regular CD Laboratories in terms of budget and organization. Generally the evaluation takes place at an earlier date and takes into account the special requirements (and, if appropriate, conditions) and clarifies whether conversion to a regular CD Laboratory is possible and appropriate.

### 4.3. International Christian Doppler Laboratory (located abroad)

CD Laboratories may also be established at universities/research institutions (funding recipients) abroad.

#### 4.3.1. Preconditions

- Requirement for scientific expertise: The scientific expertise required to study the industrial partner's topic is not available within Austria or its quality within Austria is not appropriate.
- Value for Austria as a location, either economically or scientifically: The topic to be researched is of economic or public interest to Austria. It can be plausibly demonstrated that the particular project will benefit Austria as a commercial venue (e.g. by presenting the expected knowledge gain for the Austrian private sector) or science in Austria (e.g. by planned collaborations with Austrian research institutions).
- Commercial partner: The commercial partner can demonstrate sufficient added value and research expenditure within Austria.
- Funding recipient: The funding recipient is prepared to accept the legal framework associated with a CD Laboratory and to make information available to Austrian authorities or persons delegated by them.

As far as possible, the organizational structure of CD Laboratories abroad should be based on the organizational form of CD Laboratories within Austria. The provisions regarding duration, ex-

tent of research, evaluation and budgetary levels are the same as those for CD Laboratories in Austria.

#### **4.3.2. Collaboration between non-Austrian companies and International CD Laboratories**

It is not the aim of the programme to support research at non-Austrian universities/research institutions in collaboration with non-Austrian companies. Nevertheless, non-Austrian companies may collaborate (with a status comparable to that of Austrian companies) provided that such collaborations are in the interest of the Austrian partners and that any financial support required is made available from a funding organization outside Austria.

#### **4.3.3. Quota for International CD Laboratories**

A maximum of 15 % of the programme's operational funding is available for International CD Laboratories.

### **4.4. International module of a CD Laboratory**

CD Laboratories may choose to operate one or more of their modules outside Austria. The preconditions are analogous to those for an International CD Laboratory and must be checked during the establishment of a CD Laboratory or if a new module is to be added to an existing CD Laboratory. An independent Head of Module should be appointed at the site. An international module may not continue to operate beyond the end of the CD Laboratory's period of operation (cf. Point 4.1.3). These provisions also apply if an existing external module is to be relocated abroad.

### **4.5. Participation of non-Austrian companies in a CD Laboratory**

It is possible for foreign companies to participate in a CD Laboratory that is situated in Austria. The precondition is that there is:

- Value for Austria as a location for business or research: The topic to be researched is of economic, scientific or public interest to Austria. It can be plausibly demonstrated that the particular project will benefit Austria as a commercial venue (e.g. by presenting the expected knowledge gain for the Austrian economy) or science in Austria (e.g. by planned collaborations with Austrian research institutions).

### **4.6. Special measures to promote early-stage researchers and female researchers in CD Laboratories**

The programme has a number of additional measures to promote early-stage researchers in CD Laboratories, particularly in the areas of MINT (mathematics, informatics, natural sciences and technolo-

gy) and to address the broader goal of enhancing the career prospects of female researchers. Some of the measures are explicitly aimed at promoting equality and eliminating discrimination against female researchers.

#### **4.6.1. CDG Girls Day**

Schoolgirls in junior classes (from roughly 10 to 14 years old) should have the opportunity to spend a day in a CD Laboratory to gain an insight into research work at universities/research institutions. Doing so should stimulate and strengthen their interest in research.

The CDG should agree on the selection procedure and the legal provisions with the Laboratory Hosts. The measure will be implemented by a third party contracted by the CDG.

#### **4.6.2. CDG Trial Day**

Schoolgirls in more senior classes (from roughly 15 to 19 years old) should have the opportunity to spend three days “testing” work in a CD Laboratory to gain a deeper insight into research work at universities/research institutions or companies. Doing so should stimulate and strengthen their interest in a course of study that focuses on research.

The CDG should agree on the selection procedure and the legal provisions with the Laboratory Hosts. The measure will be implemented by a third party contracted by the CDG.

#### **4.6.3. CDG Internship**

Students enrolled in a Master course should have the opportunity to work as student assistants for three months in a CD Laboratory, including if possible a month at one of the Laboratory’s company partners. This should win them over to the idea of embarking on a research career. The focus should be very much on their education.

The CDG should agree on the selection procedure and the legal provisions with the Laboratory Hosts. The measure will be implemented by the CDG as part of its administration of CD Laboratories. Students who perform a CDG Internship should be remunerated at a level commensurate with the pay of the Laboratory’s regular staff.

#### **4.6.4. Head of Laboratory endowed by the CDG**

If the female Head of the Laboratory does not have a valid contract of employment with the funding recipient and if the lack of such a contract represents the only reason why a request for support for establishment of a CD Laboratory cannot be granted, the Association may decide to waive the requirement. In exceptional cases of this kind, the salary of the Head of the Laboratory may be included under the project costs. The university/research institution must enable the Head of the Laboratory to be employed and remunerated during the lifetime of the Laboratory.

## 5. Type and extent of support and costs that may be covered

### 5.1. Type of support

Support is payable in the form of non-refundable subsidies.

### 5.2. Extent of support

The level of support is determined by the financial requirements. The following rates and upper limits apply:

#### 5.2.1. Support for CD Laboratories, CD Pilot Laboratories and International CD Laboratories as well as for external/international modules of a CD Laboratory:

- 50 % of eligible costs;
- 60 % of eligible costs if there is collaboration with SMEs, in proportion to the extent of this collaboration (cf. Point 4.1).

The absolute upper limit for the Laboratory budget is EUR 750.000 per year (EUR 650.000 per year for a CD Pilot Laboratory).

### 5.3. Eligible costs

Eligible costs include all expenditure and costs that result directly, actually and in addition (to the normal operational costs) for the duration of the research activities supported.

#### 5.3.1. Personnel costs

Costs for scientists, technicians and others are eligible, provided they are employed at the university/research institution and directly assigned to the research project. Staff costs that represent a proportion of the Host's administrative costs are not eligible.

If doing so leads to simplified administration or financial savings, the CDG as administrative body should develop a structured scheme of personnel costs based on the costs paid by the Austrian Science Fund (FWF). The scheme should be continuously adjusted and should reflect specific market forces. Schemes based on the current collective contract for the universities or on any other collective contract (e.g. the collective contract for non-university research institutions) will be accepted. Components of personnel costs that exceed the levels in the CDG's scheme and that are not compulsory as a result of the collective agreement in force at the university/research institution are not eligible for support from the CDG.

No personnel costs may be paid to the Laboratory Head (cf. Point 4.1.4). Instead, an honorarium for heading a Laboratory may be included, the level of which is determined by the CDG Executive Board. Additional voluntary payments to the Laboratory Head that are not compulsory as a result of the collective agreement in force at the university/research institution are not eligible for support from the CDG. This provision applies analogously to the Heads of external and international modules.

### **5.3.2. Fixtures (inventory items) as defined by the UGB**

The Austrian Business Enterprise Code (UGB) defines fixtures (inventory items) as objects with a purchase price of EUR 400 or more excl. VAT that are intended to form a lasting part of the CD Laboratory's business or research equipment.

The purchase costs of such items are eligible for support if the equipment is necessary or advantageous for the operation of the CD Laboratory, if it is in operation and continuously devoted to particular scientific work of the CD Laboratory during the period of the Laboratory's operation.

The following costs are eligible for support in relation to fixtures:

- The purchase costs for fixtures in the sense of the UGB, i.e. items of equipment and software licences with a purchase price of EUR 400 or more excl. VAT (including the costs of transport, installation and any necessary adaptation)
- The costs for the purchase or adaptation of special infrastructure that is directly related to the CD Laboratory

In the event of the premature termination of the CD Laboratory, the funding recipient shall be obliged to refund to the funding agency the proportion of the residual value that was covered by the public purse. In addition, in the event of a change to the institution hosting the CD Laboratory the funding recipient shall be obliged to relinquish to the new host the equipment that supports the operation of the CD Laboratory, insofar as it is required for the CD Laboratory's continued operation.

Costs for basic infrastructure are not eligible unless they relate directly and technically to the research project. Costs for buildings and premises are not eligible.

### **5.3.3. Hire-purchase costs**

Costs for the hire-purchase of fixtures (inventory items) in the sense of the UGB (Austrian Business Enterprise Code) are eligible, not including any interest or hire-purchase fees. The provisions governing the purchase of fixtures (inventory items) are to be applied by analogy.

### **5.3.4. Material costs that do not represent fixtures**

The following material costs that do not represent fixtures are eligible, provided the items are used for the research project:

- low-value assets (items with a purchase price of up to EUR 400 excl. VAT)

- acquisitions with a purchase price exceeding EUR 400 excl. VAT that are not intended to be used permanently for the CD Laboratory's business or research (e.g. non-durable parts for the use of equipment)
- materials and consumables.

### **5.3.5. Costs for third-party services**

Costs for third-party services necessary or beneficial for the research project are eligible, in particular:

- acquisition of research or advisory services
- sample preparation, external measurements and material tests
- special IT services
- maintenance, repair, installation and modification of facilities and equipment in the CD Laboratory
- pro rata costs for the use of special infrastructure or for increased operating costs from measures associated with the purchase or adaptation of special infrastructure
- costs for additional space necessary for the establishment and operation of the CD Laboratory, up to a limit of 3 % of the actual staff costs

Financial returns to the commercial partners are generally not permitted. Under exceptional circumstances, however, such costs may be deemed eligible, e.g. if there is no technically or economically justifiable alternative for preparing samples. In each case the CDG Executive Board will decide whether an exception is justified. On no account may any profit derived by the commercial partner be eligible for support.

### **5.3.6. Travel costs**

Travel costs from persons immediately involved with the CD Laboratory's research work are eligible, in accordance with the valid guidelines for reimbursement of travel costs at the host university or, in a subsidiary manner and in the case of extra-university research institutions, the Federal guidelines for reimbursement of travel costs. Costs for attendance of conferences and other scientific events are eligible if it can be shown that participation serves to present the CD Laboratory's research results (lecture, poster, publication in proceedings) or to provide Laboratory staff with knowledge necessary or appropriate for the research project (building up expertise within the CD Laboratory).

### **5.3.7. Other costs**

Other running costs of the CD Laboratory are eligible, in particular

- scientific literature and journals, access to online media etc.
- workshops, lectures by visiting scientists, presentations

Costs for reserves and savings are not eligible.

## 6. Funding recipients

Funding recipients may be:

- Austrian universities in accordance with § 6 of the 2002 Universities Act (represented by the intended Laboratory Head or the head of the host institution, in accordance with § 28 and 27 para. 1 point 2 of the 2002 Universities Act), as well as the Danube University Krems
- non-university research institutions within Austria (including the non-university institutes of the Austrian Academy of Sciences and comparable scientific establishments but not colleges of higher education)
- private universities in Austria (support granted in accordance with Point 4 is considered as “State payments for publicly advertised programmes for research, technology, development and innovation” in the sense of § 5 para. 1 of the Private Universities Act)
- non-Austrian universities and extra-university research institutions.

During the procedure from application until conclusion of an individual funding contract, the term “funding recipient” will be replaced by “applicant for funding”.

The companies collaborating with the funding recipient are not themselves funding recipients but instead generally contribute 50 % of the funds that are channelled into the research institution. To guarantee the long-term economic relevance of the research they have an immediate influence on the choice of research topic and enjoy priority access to the results (in particular to the inventions), provided that the principles of this Programme Document do not require them to be made public. In this way, funding from the public purse is of immediate benefit to the universities/research institutions and of indirect benefit to the collaborating companies and the participating scientists.

## 7. Basic principles of the procedure

### 7.1. Evaluation committee

Responsibility for the evaluation of applications for support is delegated to the CDG Scientific Board. This Board comprises two Commissions: the CD Commission is responsible for assessing applications in relation to CD Laboratories, while the JR Commission is responsible for assessing applications in relation to JR Centres.

## **7.2. Application (submission of requests for funding)**

### **7.2.1. Applications**

Requests for funding must be submitted in accordance with the application procedure (Point 7.2 of the 2015 Structure RTI Guidelines: “Application principle”) and are to be made in writing to the CDG, following the guidelines for establishment of a CD Laboratory. The procedure enables applications for support to be placed at any time; there are no calls for applications or deadlines.

An application must contain at least:

- detailed description of the research project (status of research, approaches to the problem, planned work, development of the underlying science)
- research plan, time plan and cost plan (in detail for the initial two years of research, in overview for the subsequent years)
- information on the available infrastructure (space, equipment) foreseen for the CD Laboratory (or for the spatially separated external/international module of the CD Laboratory)
- documentation relating to the planned Laboratory Head to enable an assessment of her or his scientific qualifications
- evidence that the person planned to head the Laboratory is authorized to represent the funding recipient (or a statement of intent on the part of the applicant for funding)
- information on the commercial partners

The CDG offers information and advice in advance of the formal submission of an application. Applications may be withdrawn at any time and may be modified following an invitation from the CD Commission to improve or rework them.

### **7.2.2. Initial check**

Applications will be submitted to a formal check by the management agency (the CDG General Secretariat) and forwarded to the CD Commission, which is entrusted with the scientific assessment. Applications that contain formal errors will be returned for correction. If there is any doubt whether formal criteria have been met, the CDG Executive Board will decide.

## **7.3. Assessment and decision-making criteria**

Two aspects are primarily considered in assessing whether an application merits funding:

- (1) scientific quality of the research work described in the application;
- (2) scientific qualifications of the person planned to head the Laboratory and her or his ability to lead a research group.

### 7.3.1. Scientific quality of the application

The scientific quality of an application is assessed according to the following criteria

- Is the research programme at a high scientific level as measured by international standards?
- Are the overall aims clear and realistic?
- Will the results advance the state of basic research in the scientific discipline?
- Is the theoretical background adequately described?
- Does the planned methodology show a high promise of success?
- Are the planned academic collaborations adequate?
- Are any aspects of diversity relevant to the research project and, if so, have they been appropriately addressed?
- How would you assess the collaboration with the company partners?
- How do you judge the level of technical innovation in this proposal?
- How would you assess the possible impact of the results on the companies/ the non-academic sector?
- How do you judge the economic or public interest in the research topic?
- Are the intended resources sufficient and well focussed?

### 7.3.2. Scientific qualifications of the Head of the Laboratory

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

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

## **7.4. Assessment procedure**

### **7.4.1. Requests to establish a CD Laboratory**

Assessment is performed by the CD Commission and is based on at least three reviews from external international experts (peer review). In exceptional cases, decisions may be taken when only two reviews are available. The assessment criteria should be transmitted to the external referees, e.g. in the form of a standard list of questions. To be sent for external review, an application must have a certain standard of quality: the CD Commission will decide whether the required level is reached.

A positive recommendation for funding requires a hearing for the person who will head the Laboratory in which she or he has the opportunity to present the research project to the CD Commission. The CD Commission base its decision to invite the applicant to a hearing on advice from the external referees.

### **7.4.2. Applications to establish an International CD Laboratory or a CD Laboratory with International modules**

In principle, the procedure is the same as that in Point 7.4.1. However, the assessment must also consider the scientific aspects of the special preconditions for an International CD Laboratory (cf. Point 4.3) or an International module (cf. Point 4.4).

### **7.4.3. Applications for amendment to a CD Laboratory**

Assessment is the responsibility of the CD Commission, which may decide to obtain an evaluation from an external referee. If the amendment would cause the Laboratory budget to rise by more than 40 % of the budget to date, an evaluation from an external referee is required before the CD Commission may decide on its recommendation to the CDG Executive Board. There will generally not be a fresh hearing with the Laboratory Head.

### **7.4.4. Decision of the CD Commission**

The CD Commission may decide

- to initiate the external review procedure
- to invite the applicant to a hearing before the CD Commission
- to recommend funding (perhaps with particular terms or conditions or with certain recommendations)
- to recommend funding in the form of a CD Pilot Laboratory (perhaps with particular terms or conditions or with certain recommendations)
- to return the application to the applicant to allow improvement and reworking
- to recommend rejecting the application

## **7.5. Decision-making process**

### **7.5.1. Requests to establish a CD Laboratory**

The decision on whether to grant support is taken by the CDG Executive Board on behalf of the State. A positive decision requires approval of the representative from the Federal Ministry of Digital and Economic Affairs on the CDG Executive Board (the funding authority enjoys a veto right).

The decision is taken on the basis of the CD Commission's recommendation and of the eligibility for funding and desirability from the point of view of science policy and with regard to the availability of the budget necessary for the Laboratory. The Executive Board takes the funding decision immediately following its decision (effective within the CDG) on whether to establish a CD Laboratory or a CD Pilot Laboratory.

### **7.5.2. Decision of the CDG Executive Board**

The CDG Executive Board may decide

- to approve support (perhaps with particular terms or conditions or with certain recommendations)
- to approve support in the form of a CD Pilot Laboratory (perhaps with particular terms or conditions or with certain recommendations)
- to return the application to the CD Commission for further consideration
- to reject the application

Decisions are to be communicated to applicants in writing. If applications are rejected or returned to the CD Commission for further consideration, the applicants should be notified of the most important reasons for the decision. The further procedure is subject to Point 9.3.

## **7.6. Evaluation handbook and Guidelines**

### **7.6.1. Evaluation handbook**

As the management agency, the CDG should include information on the procedure for evaluation, the process of checking and establishing whether the assessment and decision-making criteria have been met and the external peer review in an evaluation handbook.

The evaluation handbook should be approved by the Federal Minister of Digital and Economic Affairs.

### **7.6.2. Guidelines**

The CDG should describe the assessment and evaluation criteria in more detail in a set of guidelines (for applicants).

## **8. Procedure for contract extension**

### **8.1. The first phase of extension**

A positive evaluation in accordance with Point 12.2.1 is absolutely required before an extension of State support for three years (the first phase of extension) beyond the introductory phase may be granted. The funding recipient does not have to submit a special application for extension but documents relating to the future research work (research plan, time plan and cost plan) must be made available during the evaluation.

In accordance with Point 12.2.1, the referee chosen by the CD Commission prepares a written report based on the evaluation meeting and the evaluation report and this is submitted to the CD Commission.

The CD Commission's recommendation is based on

- evaluation report
- research plan, time plan and financial plan presented by the funding recipient (in detail for the third to fifth years of research, in overview for the remaining years)
- evaluation hearing
- evaluator's review

In the case of assessment of a CD Pilot Laboratory, evaluation should take account of the conditions that led to this particular choice of support.

#### **8.1.1. Recommendation of the CD Commission**

The CD Commission may recommend

- continuation of funding for the CD Laboratory (perhaps with particular terms or conditions or with certain recommendations)
- continuation of funding and conversion of a CD Pilot Laboratory to a regular CD Laboratory in the first phase of extension (perhaps with particular terms or conditions or with certain recommendations)
- a further review by an external referee
- rejection of the request for extension of the CD Laboratory (coupled with approval of a phasing-out period)
- rejection of the request for extension of the CD Laboratory

### **8.1.2. Decision of the CDG Executive Board**

The decision on the extension will be taken by the CDG Executive Board based on criteria analogous to those applied in decisions on applications to establish CD Laboratories. A positive decision requires approval of the representative from the Federal Ministry of Digital and Economic Affairs on the Executive Board (the funding authority enjoys a veto right).

The CDG Executive Board may decide

- to extend the funding of the CD Laboratory (perhaps with particular terms or conditions or with certain recommendations)
- to convert a CD Pilot Laboratory to a regular CD Laboratory in the first phase of extension (perhaps with particular terms or conditions or with certain recommendations)
- to return the application to the CD Commission for further consideration
- to reject the request for extension of the CD Laboratory but to grant funding for a phasing-out period
- to reject the request for extension of the CD Laboratory

Decisions, together with any terms, conditions and recommendations, are to be communicated to applicants in writing. If applications are rejected, the applicants should be notified of the most important reasons for the decision.

## **8.2. The second phase of extension**

A positive evaluation in accordance with Point 12.2.2 is absolutely required before an extension of State support for two years beyond the first phase of extension (the second phase of extension) may be granted.

The essential provisions relating to the procedure for the first phase of extension should be applied.

## **9. Funding contracts and regulations relating to changes**

The contracts to be concluded in relation to funding are arranged in a hierarchical structure and together regulate the organization of CD Laboratories.

### **9.1. Types of contract**

In relation to establishment, to operation and to funding, contracts are concluded with the institutions hosting CD Laboratories, both at the general level (containing conditions for all CD Laboratories and modules at the university/research institution) and for particular CD Laboratories. These contracts define contractual responsibilities, both between the CDG and the host institution and, independently, between the State and the host institution. The following types of contract may be distinguished:

### **9.1.1. General agreement with the host institution (*Generelle Betreibervereinbarung*)**

A General agreement with the host institution is concluded between the CDG, in its own right, and the host institution. It gives general conditions governing all CD Laboratories at the host institution:

- the relationship between the host institution and the CDG (both as an Association and as a funding agency in its own right)
- the use of equipment funded by the CDG
- IPR regulations
- responsibilities to the CDG from the relationship host institution – company partner (member of the Association)
- responsibilities to the National Foundation for Research, Technology and Development (in the case of CD Laboratories funded by the foundation) or, if appropriate, other funding providers different from the Federal government.

### **9.1.2. General funding contract - State support (*Generalförderungsvertrag*)**

A General funding contract is concluded between the State, represented by the CDG, and the host institution. It regulates all CD Laboratories with Federal funding:

- the legal relationship between the State and the host institution as recipient of Federal funding under the programme
- the relationship between the host institution and the CDG (as the State's management agency)

### **9.1.3. Concrete agreement with the host institution (*Konkrete Betreibervereinbarung*)**

A Concrete agreement with the host institution is concluded between the CDG, in its own right, and the host institution. It regulates the establishment and running of a particular CD Laboratory and includes all provisions not contained in the general agreement with the host institution, e.g. research plan, time plan and financial plan. If the CDG has not (yet) concluded a general funding contract with the host institution, the concrete agreement with the host institution must contain all necessary provisions pertaining to support.

### **9.1.4. Individual funding contract - State support (*Einzelförderungsvertrag*)**

An Individual funding contract is concluded between the State, represented by the CDG, and the host. It regulates the precise form of support for a particular CD Laboratory in accordance with the present Programme Document, as far as this is not already specified by the general

funding contract. If the funding recipient does not (yet) have a general funding contract, the individual funding contract must contain all necessary provisions pertaining to support.

#### **9.1.5. Contractual document**

The provisions of the contracts referred to in points 9.1.1 and 9.1.4, or in points 9.1.3 and 9.1.4, may instead be included in a single, joint contract, provided that the legal relationships to be regulated are clearly differentiated.

### **9.2. Conclusion of general funding contracts with universities/research institutions**

General funding contracts (cf. Point 9.1.2) are to be concluded with Austrian universities/research institutions. On the basis of these contracts, the State's individual funding contracts are to be concluded. These latter contracts must take into account provisions of the 2015 Structure RTI Guidelines and of this Programme Document in addition to any relevant provisions of the laws governing research funding.

### **9.3. Conclusion of individual funding contracts**

If funding is granted, individual funding contracts (cf. Point 9.1.4) from the State, represented by the CDG as management agency, are to be concluded with the funding recipients for the introductory phase. The relevant options for the two phases of extension should be included in the contracts.

A written offer of support will be sent to the applicant. Written acceptance of this offer will be interpreted as conclusion of the funding contract. The applicant should note that the offer of support, together with any terms and conditions with which it is associated, must be accepted within a reasonable period of time, which is to be specified. Failure to do so will result in retraction of the offer of support.

If there is no general funding contract in accordance with Point 9.1.2, the provisions that would be contained therein are to be included in the individual funding contracts.

Individual funding contracts must regulate not only the research plans, the time plans and the financial plans but also and in particular the responsibilities arising from the funding programme. Attention is drawn especially to:

- the provisions for reclaiming funding (in accordance with Point 8.1.3 of the 2015 Structure RTI Guidelines)
- the inclusion of sufficient reporting requirements
- participation in financial controlling (in accordance with Point 8.1.2 of the 2015 Structure RTI Guidelines)
- the obligation to use the correct billing address ("Christian Doppler Laboratory for ...")
- the obligation to make reference to the BMDW in all publications

- the transfer of responsibilities in subcontracts (e.g. the regulations governing confidentiality in contracts of employment, in service contracts and in contracts for works and services)
- a declaration on processing of electronic data (in accordance with § 10 of the sample funding contract of 3.10.2018, BMF-111401/0037-II/1/2018)
- other terms of the contract, to be agreed in accordance with the 2015 Structure RTI Guidelines and the Programme Document.

## **9.4. Changes to individual funding contracts**

### **9.4.1. Amendment to the CD Laboratory**

An increase to the CD Laboratory's budget associated with a change to the Laboratory (cf. Point 4.1.6) represents a change (extension) to the funding and requires a corresponding funding decision by the CDG Executive Board. A positive decision requires the approval of the representative from the Federal Ministry of Digital and Economic Affairs (the funding authority enjoys a veto right).

The decision is based on the recommendation of the CD Commission, which evaluates the scientific arguments for amending (expanding) the CD Laboratory (cf. Point 7.4.3).

### **9.4.2. Other contractual changes**

The Executive Board may take decisions relating to small adaptations to the funding (below the level of Point 9.4.1) and to other contractual changes, including a change to the funding recipient (e.g. in the event of relocation of a CD Laboratory to another university/research institution) without requiring a recommendation from the CD Commission.

## **9.5. Special cases**

If a contractual phase of a CD Laboratory is funded by other than State money and if as a result the present Programme Document is not applicable, the Laboratory's support should be transferred to the funding programme by means of appropriately modified individual funding contracts if continuation of support is to come from State money, assuming that the same preconditions apply as those regulated in the Programme Document.

## 10. Termination of support and phasing-out period

### 10.1. Provisions relating to termination of support

The support of individual CD Laboratories ends, without legal prejudice to any claims for repayment of financial support in accordance with the 2015 Structure RTI Guidelines, on:

- reaching the seven-year maximum period of support (in addition to a possible phasing-out period of up to 12 months in accordance with Point 10.2.1)
- premature termination of the CD Laboratory for scientific reasons, in particular the absence of a positive decision to extend funding in accordance with Points 8.1 or 8.2. In such cases funding for a phasing-out period of up to a maximum of 12 months can be agreed in accordance with Point 10.2.2.
- failure to reach the lower level for the CD Laboratory budget of EUR 140.000 as a result of the cessation of collaboration with a company: the funding recipient must be granted appropriate time to make good the deficit by substituting another company partner: in such cases a phasing-out period of up to 12 months may be agreed in accordance with Point 10.2.3.

### 10.2. Provisions relating to the phasing-out period

Funding during phasing-out periods should be granted in a restrictive manner. Decisions on individual cases are taken by the Executive Board, if necessary based on a recommendation of the CD Commission. The maximum duration of a phasing-out period is 12 months.

#### 10.2.1. Phasing-out after seven years of operation

The normal phasing-out period serves to enable the completion or supervision of any masters and diploma theses as well as of doctoral theses that despite careful planning could not be finalized during the regular seven-year lifetime of the CD Laboratory as a result of particular scientific considerations or for other, non-foreseeable reasons. The phasing-out period should not be viewed as an automatically granted eighth year of research funding. It represents very much an exception and should not be taken into account in the time plans that underlie the CD Laboratory's research work.

Personnel costs are eligible for support, together with necessary travel costs and material costs. Equipment purchased during the phasing-out period is not eligible for support.

### **10.2.2. Phasing-out after premature termination for scientific reasons**

Analogously to Point 10.2.1, phasing-out funding may also be granted in cases when continued funding for a CD Laboratory is not approved (cf. Point 8.1.1, 4th sub-point). The phasing-out period should enable the completion or supervision of any masters and diploma theses as well as of doctoral theses and safeguard the Laboratory's scientific results.

### **10.2.3. Phasing-out after failure to reach the lower limit of the budget**

The termination of a CD Laboratory as a result of the cessation of an industrial collaboration (or if the lower level of EUR 140.000 for the laboratory budget is not met) can be postponed by approval of funding for a phasing-out period, thereby avoiding significant damage to the CD Laboratory. Phasing-out funding of this kind serves both to complete and supervise masters/diploma theses and doctoral theses and to safeguard the Laboratory's scientific achievements to date and to enable the new ties to commercial partners necessary to enable the normal continuation of the CD Laboratory, or its reopening. The phasing-out period can thus be seen as a kind of interim period.

Personnel costs are eligible for support, together with necessary travel costs and material costs. Equipment purchased during the phasing-out period is not eligible for support.

If the CD Laboratory is extended or reopened, the phasing-out period is shortened as appropriate. In any event, the duration of the phasing-out or interim support will be taken into account in calculations of the total lifetime of the CD Laboratory.

## **11. Indicators of whether goals have been reached**

The indicators serve to assess whether the operational goals have been reached (cf. Point 1.2). A distinction is made between quantitative and qualitative indicators. The indicators serve primarily to evaluate the programme but also indirectly to evaluate individual CD Laboratories. However, it should be noted that in accordance with the programme's basic principle of autonomy in all scientific matters the way indicators are applied to the scientific evaluation of CD Laboratories is itself subject to the opinion of experts. Because of the wide range of scientific disciplines supported, it can be assumed that the weightings assigned to the various indicators will differ.

The parameters are largely calculated from information contained in the CD Laboratory's reports, in the database relating to the processes and the programme (cf. Point 12.2.5) and in responses to questionnaires.

Correlation between goals and indicators:

<b>Programme goal</b>	<b>Indicators</b>
duration and intensity of collaboration	<ul style="list-style-type: none"> <li>• number of companies</li> <li>• length of collaboration</li> <li>• number of and reasons for premature withdrawals</li> <li>• expansion of the research programme</li> <li>• collaboration with other CD Laboratories and JR Centres</li> <li>• collaboration with COMET</li> <li>• other collaborations</li> <li>• fluctuation of the research group</li> </ul>
results from basic research at a high level	<ul style="list-style-type: none"> <li>• refereed publications</li> <li>• non-refereed publications</li> <li>• conferences</li> <li>• scientific awards and prizes</li> </ul>
research relevant to practice	<ul style="list-style-type: none"> <li>• applicability of the research theme</li> <li>• type and intensity of the collaboration between partners from research and industry</li> </ul>
technological leverage	<ul style="list-style-type: none"> <li>• inventions</li> <li>• patents</li> <li>• implementation of follow-up activities</li> <li>• further research projects arising</li> </ul>
knowledge transfer	<ul style="list-style-type: none"> <li>• innovations to processes</li> <li>• innovations to products</li> <li>• development of the research partner's level of research contracts</li> </ul>
development of human resources	<ul style="list-style-type: none"> <li>• diploma theses</li> <li>• doctoral theses</li> <li>• "<i>Habilitations</i>"</li> <li>• offers of chairs</li> <li>• scientific awards and prizes</li> <li>• transfer of CD Laboratory personnel to industry</li> </ul>
commercial development	<ul style="list-style-type: none"> <li>• change in turnover</li> <li>• change in number of employees</li> <li>• number of staff undertaking research</li> <li>• development within the company of the division to which the CD Laboratory is assigned</li> </ul>
improved international contacts	<ul style="list-style-type: none"> <li>• number of company partners outside Austria</li> <li>• International CD Laboratories</li> <li>• International modules</li> <li>• international visibility of the CDG</li> </ul>

## 12. Monitoring and evaluation

Two levels of evaluation need to be distinguished: the project level, i.e. monitoring the funded project (the CD Laboratory); and the programme level, i.e. evaluation of the cumulative extent to which the research programme's goals have been reached, as specified in the present Programme Document.

## 12.1. Programme level

By the end of 2022 (cf. Point 3) a comprehensive evaluation of the programme is to take place. Based on the example of the assessment of the usefulness, programmes and system that was undertaken in 2011 and on the joint programme evaluation that was undertaken in 2016, the evaluation should again assess the CDG's structure and processes and thus provide an overall evaluation of the funding organization and the programme it administers. The selection and appointment of international experts will be undertaken by the BMDW after a call made in accordance with the regulations governing the award of contracts.

The evaluation has the purpose of assessing the programme's results and its effectiveness within the overall portfolio for science funding in Austria, as well as its impact on further developing the innovation system in Austria. In undertaking the evaluation, the extent to which the various operational goals (cf. Point 1.2) have been reached, assessed by means of the indicators (cf. Point 11), should be determined and an overall evaluation of the improvements to the scientific and economical usefulness should be performed. The evaluators should use the results as a basis for preparing recommendations on the continuation of the funding programme.

The quantitative results of the evaluation should be put in relation to the corresponding results of the evaluations performed in 2011 and 2016 to enable the programme's development to be visualized on the basis of the defined indicators.

## 12.2. Project level

### 12.2.1. Scientific two years evaluation

At the end of the introductory phase (before the close of the second year of research) the CDG should undertake a scientific evaluation of each CD Laboratory. The primary goal of the evaluation is to assess the progress of the basic research.

The assessment is based on an evaluation hearing at the university/research institution, involving at least one international expert. The expert undertakes the scientific evaluation of the results in a standardized manner (e.g. by means of a list of standard questions), taking the particular features of the scientific discipline into account.

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

- Is the research innovative and at a high level based on 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?

For an evaluation after two years, the Head of the Laboratory must submit an evaluation report and present it verbally during the hearing (presentation of the research results). The evaluation report must be prepared in accordance with guidelines to be issued by the CDG. On the basis of the evaluation report and the evaluation hearing, the referee will prepare a written review for presentation to the CD Commission.

#### **12.2.2. Scientific five years evaluation**

By the end of the first phase of extension (before the close of the fifth year of research) a further evaluation should be undertaken in accordance with to the rules for evaluation after two years but taking into account the results expected from five years of research..

#### **12.2.3. Economic evaluation**

There is no special economic evaluation of the progress of the work while the CD Laboratory is running. The present programme operates under the principle that economic value is guaranteed by the industrial partner's readiness to continue to contribute 50% (or 40% for SMEs) of the project costs (in cash). However, economic aspects are taken into consideration in the evaluations performed after two and five years and represent an important point in the evaluation of the programme (cf. Point 12.2.8).

#### **12.2.4. Final evaluation**

A final evaluation is to be performed immediately following the closure of each individual CD Laboratory with the aim of analysing the Laboratory's contribution to the programme goals, in particular relating to the academic area, the commercial partner, the improvement to the national innovation system and the support of young scientists. The final evaluation includes the submission of a concluding scientific report and of a concluding statistical report. The concluding scientific report documents the results of the final period. To make these accessible to the general public, the concluding report also contains a summary of the CD Laboratory's results over its entire period of operation and of the application of results by the company partners. The concluding report should be prepared in accordance with the guidelines to be issued by the CDG. The concluding statistical report contains appropriate numerical data.

### **12.2.5. Monitoring of the scientific development of the CD Laboratories**

There is a continuous scientific monitoring of CD Laboratories by evaluation reports (substantive report in accordance with Point 8.1.2 of the 2015 Structure RTI Guidelines) as well as by the gathering of appropriate data. Information will be collected relating to the CD Laboratories' structure, describing the project's progress and permitting an assessment of the extent to which the programme's goals have been attained. The data will include in particular information on personnel, number and type of academic degrees, transfer of staff to other employers, project output (publications, participation in conferences, patents, inventions), knowledge transfer with the industrial partner, collaborations, additional projects and grants as well as scientific prizes, the organization of scientific events, applications for follow-up projects etc. The data permit a statistical analysis and form the basis for evaluations. Monitoring will be supported by a database to be operated and extended by the CDG and containing information about the processes and the programme.

### **12.2.6. Proof of appropriate use of support**

The CDG's auditing procedures continuously verify whether the support is being used in conformance with the regulations. Within first twelve months of the start of research work the CDG is to examine on site the funding recipient's financial structures for the CD Laboratory. The funding recipient must be required to submit at least annual reports on the disposition of funds in accordance with Point 8.1.2 of the 2015 Structure RTI Guidelines. The CDG will reimburse the funding recipient for a financial report on the funding programme containing and summarizing the individual invoices.

Furthermore, as management agency the CDG is required to carry out spot checks of whether the research funding is used appropriately (assessment of subjective and financial regularity). Each CD Laboratory will generally be checked once in each calendar year (or more often if there is need for additional clarification) and checks will also extend to the support provided by other funding institutions within the CD Laboratory's overall funding.

### **12.2.7. Financial Controlling**

The funding recipient is to be obliged to participate in the CDG's financial controlling of the CD Laboratory. The controlling must include at least the following points:

- annual reports from the CD Laboratory to the CDG
- comparison of planned and actual costs
- necessary participation in checks that the support is being used appropriately (either site visits of in the office)

The costs in the financial controls are to be broken down in a manner to be agreed upon between the funding agency and the CDG.

### **12.2.8. Collection of data within the programme evaluation**

The programme evaluation is to gather data pertaining to the programme's benefits. This should consider the results from all CD Laboratories that have closed since the previous evaluation on the basis of the following documents, which permit data storage and statistical analysis throughout the entire period of the individual CD Laboratories:

- the request for establishment of a CD Laboratory and the referees' reports
- the evaluation reports and the referees' reports
- the final report
- statistic data gathered annually and after conclusion of the CD Laboratory

Several CD Laboratories are considered together both to produce more readily comparable data and to save costs.

The collection of data serves to assess the extent to which the programme's goals are realised and is directly useful at the programmatic level (cf. Point 12.1). It is carried out exclusively by external experts during the evaluation of the programme. The evaluators are selected following a call issued by the BMDW in accordance with the valid rules for the award of contracts. The evaluators will correlate the size of input (level of support, number of coworkers etc.) with the output (number of publications, dissertations, patents etc.) by examining the data gathered during the CD Laboratory's lifetime. The results will be directly related to the results of the joint programme evaluation undertaken in 2016.

## **13. Interim provisions**

### **13.1. Continued validity of existing general funding contracts**

Until new general funding contracts are concluded (cf. Point 9.1.2), existing general funding contracts concluded on the basis of the previous Programme Document ref. BMWFJ-97.430/0026-C1/9/2013 will be applicable also to further support that is granted.

### **13.2. Continued use of existing individual funding contracts**

In principle, individual funding contracts that have previously been concluded remain in force for the funding period to which they relate. However, any changes necessitated as a consequence of the present Programme Document will come into effect when new General funding contracts (Point 9.1.2 in association with Point 13.1) enter into force.

### **13.3. Application of the budgetary limit for CD Laboratories**

The lower limit of EUR 140.000 for the annual budget of a CD Laboratory applies to all CD Laboratories established on or after 01.01.2020 and will continue to apply until the end of their normal period of operation. For laboratories that have already been approved, the previous lower limit of EUR 110.000 remains in force.

The upper limit of EUR 750.000 for the budget applies from 01.01.2019 to all newly established CD Laboratories as well as to previously approved CD Laboratories.

### **13.4. CD Lectureships/Heads of Laboratory endowed in accordance with the 2014 Programme Document**

Any Lectureships/Heads of Laboratory endowed in connection with CD Laboratories in accordance with the 2014 Programme Document will continue to be supported under the original conditions until the agreed date of their conclusion.