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## **DNRF** in Brief:

- The DNRF was established in 1991 as an independent organization with the objective of funding basic research at a high international level.
- Since 1991, the DNRF has committed itself to supporting Danish research institutions with 9.2 billion DKK (more than 1.2 billion EUR).
- The DNRF has an endowment of approximately 5.7 billion DKK (800 million EUR) and spends around 470 million DKK (nearly 60 million EUR) annually.
- The main funding instrument is Centers of Excellence and the foundation has established a total of 119 centers since 1993.

## Introduction

The Danish National Research Foundation (DNRF) funds outstanding basic research at the highest international level and at the frontiers of all research fields to strengthen the development of Danish research.

This guide provides information to potential applicants who intend to submit a proposal to the Danish National Research Foundation's  $11^{th}$  application round for new Centers of Excellence.

Applicants are advised to visit <a href="www.dg.dk">www.dg.dk</a> for further information about the foundation, the Center of Excellence funding mechanism, and the existing Centers of Excellence.

The deadline for outline proposals is **Tuesday**, **June 1**, **2021**, **at 12 noon**.

Outline proposals must be written in English using an application form, which can be downloaded from <a href="www.dg.dk">www.dg.dk</a>. The application form must be submitted as a PDF file and sent as an attachment to an e-mail to <a href="mailto-DNRFRound11@dg.dk">DNRFRound11@dg.dk</a>.

## **The Center of Excellence Program**

The objective of the Center of Excellence program is to strengthen Danish research by providing the best possible working conditions and organizational set-up for selected top researchers. Excellence is the main criterion when assessing proposals for new centers.

A center grant is large and flexible and has a duration of up to 10 years, with a first funding period of six years and, if renewed, the grant can be extended for a second funding period of an additional four years.

Centers can be established within and/or across all research areas: Humanities, Life Sciences, Natural Sciences, Social Sciences and Technical Sciences.

The application procedure is conducted as a "bottom-up" process, and applicants from all research fields are encouraged to apply. The application process is composed of two stages. The first stage involves an assessment of the outline proposals submitted. In the second stage, a number of applicants are invited to submit full proposals. A detailed description of the funding mechanism and the application process can be found on the following pages.

## The Call for the 11<sup>th</sup> Application Round for Centers of Excellence

The foundation funds Centers of Excellence within all academic fields and acknowledges that they have different profiles and thus different needs. From this application round, the applicant can apply for a Center of Excellence within a budget framework of up to 36 million DKK incl. overhead for a six-year period or for up to 60 million DKK incl. overhead for a period of six years. By allowing applicants to seek a budget of up to 36 or 60 million DKK, the foundation hopes to open up the application process to centers in academic fields that might have lower research expenses, but that are still of a size that makes it possible to create an environment with a critical mass for excellent research and research education, elements that constitute a Center of Excellence.

On top of a grant of 60 million DKK, but only in very exceptional cases, it will be possible to apply for extra funding for an extraordinary expense, for example, new equipment, expensive experimental research, or field expeditions. This extra funding needs to be explained and argued for separately (see a further description in the section on the budget).

Centers granted up to 36 million DKK in the first six-year funding period will be able to apply for up to 60 million DKK in the second four-year funding period and vice versa.

The foundation would like to emphasize that the call is open to all applicants: new applicants, applicants who have previously submitted applications to the foundation, and applicants who have or have had a grant from the Danish National Research Foundation.

Excellence is the overall criterion, and all applications will be evaluated on equal terms as described in the guidelines below.

#### **Contact Information**

Applicants are urged to contact the secretariat if they have any questions about the application process. Questions may be directed to:

- CEO Søren-Peter Olesen, e-mail: <a href="mailto:spo@dq.dk">spo@dq.dk</a>, tel.: +45 3318 1950
- Senior Adviser Johanne Juhl Ryø, e-mail: <u>ii@dq.dk</u>, tel.: +45 3318 1951
- Senior Adviser Mette Müller, e-mail: mm@dg.dk, tel.: +45 3318 1957

## What is a Center of Excellence?

Centers of Excellence (CoE) consist of units located at research institutions (the vast majority at universities) sharing a common idea or vision and an overall and clearly defined set of research objectives.

There is no fixed formula for creating a CoE. The centers may differ in size and mode of organization, depending on their subject and scope. Some centers become rather large during the grant period, employing more than 60 people divided into several research teams, while others have fewer than 15 members. The center must have a well-defined framework for cooperation. The foundation finds it essential that applicants form a joint physical community facilitating an intensive daily interaction, and centers may also choose to form partnerships with other researchers or institutions either in Denmark or abroad.

The foundation expects a CoE to be an integral part of and to actively work with its host institutions in terms of educational activities and ongoing interactions with other research groups. Research-based education is an important part of a center's mission because the centers serve as important training sites for the next generation of researchers, often attracting exceptional students from Denmark and abroad. However, centers are also encouraged to engage with education and dissemination in a broader sense.

Centers are strongly encouraged to pursue collaboration with leading international researchers and to include and attract exceptional and talented employees and visitors from abroad.

## **Center Leader and Co-applicants**

A Center of Excellence is headed by a center leader (the applicant). This leader must not only be a distinguished researcher able to show excellence in his or her own research but must also have proven himself or herself as a visionary leader able to create a dynamic and thriving research environment. The foundation expects the center leader to work full time for the center.

Co-applicants of the proposed center are members who contribute substantially to the science and play an active and critical role in the success of the proposed endeavor. If the proposed center is granted funding, a co-applicant would devote a specified percentage of her/his time to the center throughout the funding period and would be considered senior/key personnel.

When an applicant submits an application, the foundation expects that he/she has carefully considered the range of commitments of the co-applicants and the diversity of the core group in terms of age and gender and other aspects.

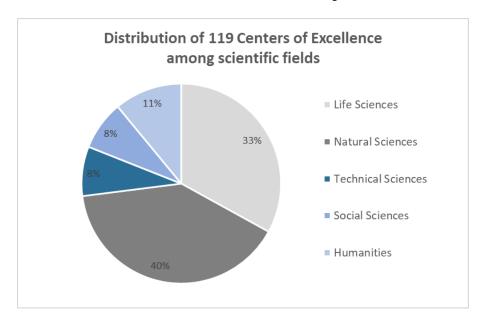
## **Setting the Scene for Highly Ambitious Research**

The foundation welcomes outstanding research of a high international caliber that may be described as ambitious, highly creative, truly novel, scientifically daring, and potentially groundbreaking basic research.

Centers are expected to engage in confronting some of the large unsolved questions and to address the challenges that intrigue them the most. The philosophy is that new and partly unexpected knowledge transcending existing knowledge barriers emerges when dedicated people with high scientific standards work together to explore problems that spark their passion. In other words, the foundation welcomes curiosity-driven research – or what might be described as exceptional researchers' "dream projects."

## **Distribution of Centers Among Scientific Fields**

The foundation welcomes proposals from all fields of research. A majority of the centers can be described as interdisciplinary and, therefore, do not readily fit into one category. However, the figure below shows how the 119 centers established so far categorize their main research field.



#### The Budget and Eligible Costs

A center grant is large and flexible. The grant may cover expenses that are directly attributable to the center, such as salaries, travel costs and conferences, operational costs, and equipment, and which are relevant and necessary in order to carry out the project. Overhead should be included in the budget (44 percent for universities). Salaries for Ph.D. students, post-doctoral

staff, visiting staff, and technical and administrative staff may be included. As a rule, salaries for tenured staff cannot be covered by the DNRF grant.

It is possible to request funding within a budget framework of up to a total of 36 million DKK incl. overhead for a six-year period or for up to 60 million DKK incl. overhead for a six-year period.

In exceptional cases, the foundation will cover extraordinary expenses in excess of a grant of 60 million for expenses that are a prerequisite for conducting the center's research, e.g., equipment, costs for expensive experimental research, or field expeditions.

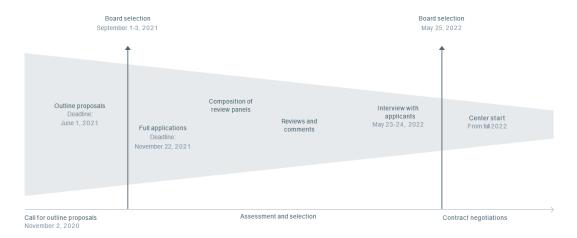
When submitting an outline proposal, applicants are asked to include an estimated budget for a six-year period covering the funding requested from the foundation.

If invited to submit full proposals, applicants are asked to include a total comprehensive budget estimate for the proposed center. The foundation expects a high level of financial commitment from the host institution, which must be evident from the budget and described in detail in the support letter from the host institution.

## **Assessment and Selection**

Calls for new centers are announced approximately every two and a half years, and they involve a two-stage application process. In the first stage, prospective center leaders are invited to submit short outline proposals. In the second stage, applicants are invited to submit full proposals that are reviewed by three international experts in the field. Prior to the final selection, the board interviews each applicant.

Outline proposals are solely reviewed by the board of the foundation, which consists of nine members who possess insight into research at the highest international level. Thus, the applicants should pay attention to the fact that the outline proposals are written for educated laymen, not peers within their discipline. Only invited full proposals are sent for peer review.



The overall success rate from submission of outline proposals to establishment of a center has been about 6.5 percent in the two previous application rounds. About 15 percent of the outline

proposals have moved on from the outline stage to the full application phase, and about 40 percent of those proposals have resulted in new Centers of Excellence.

## **Outline Proposals**

Outline proposals must be written in English using an application form, which can be downloaded from <a href="www.dg.dk">www.dg.dk</a>. The application form must be submitted as a PDF file and sent as an attachment in an e-mail to <a href="DNRFRound11@dg.dk">DNRFRound11@dg.dk</a>.

The foundation must receive all proposals no later than **Tuesday**, **June 1**, **2021**, **by 12 noon**. Please refer to the application form for specific details about the content of the application.

## **Full Proposals**

When invited to submit full proposals, applicants should further develop the outline proposal following the guidelines below set by the foundation. The full proposal must consist of:

- A visionary presentation (max five pages or 12,000 characters incl. spaces) expanding the overall research idea, including:
  - A description of its dimension of novelty and potential for groundbreaking results and an argument for its scientific relevance and expected impact.
  - A strategy for addressing the challenges. How will the center be organized? Which competencies/capacities will be involved? How will a strong, creative, and dynamic research environment be established? With which institution(s) will it be affiliated? What are the qualifications of the proposed center leader (scientific as well as managerial skills)? Is the diversity factor in the core group well represented and if not what measures/plan will be implemented to address it in the lifetime of the center? Will specific initiatives be undertaken to attract young and talented researchers? How do the applicants plan to attract international researchers? What sort of international collaboration is envisaged? How will the research activities relate to existing Danish research in this area?
- A description of the planned research program (max 10 pages or 24,000 characters incl. spaces, excl. necessary references) including
  - Information on the different sub-projects together with the active roles of the coapplicants and any new possible tenured staff positions.
  - A Gantt diagram or timeline illustrating the research program, its sub-projects and the people involved.
- CV of the proposed center leader, including a brief and concise outline of his or her professional career and an Open Researcher and Contributor ID (ORCID), if available (max 4,800 characters incl. spaces).

Further, the CV must include:

- A list of the proposed center leader's ten most important publications.
- A paragraph summarizing the general impact of the work of the proposed center leader within the application's scientific field.
- Total number of publications within the categories: articles, monographs, book chapters, proceedings, other.
- A list of publications from the last ten years (optional).
- CVs for each of the participating co-applicants, including a brief and concise outline of his
  or her professional career and an Open Researcher and Contributor ID (ORCID), if
  available (max 2,400 characters incl. spaces per CV).

Further, the CVs must include:

- A list of the co-applicants' five most important publications.
- Total number of publications within the categories: articles, monographs, book chapters, proceedings, other.
- A detailed budget (for up to either 36 or 60 million DKK) for a six-year period covering the applied funding from the DNRF, including financial commitment from the host institution and funding from other sources.
- If the applicant is asking for extraordinary expenses in excess of a grant of 60 million DKK, a separate budget must be filled out and documentation for those expenses must be enclosed.
- A list of any partial or full funding awarded and/or pending applications for large grants.
- A letter of support from the host institution signed by the Head of Department and the
  Dean documenting the institution's commitment to the proposal and how the host
  institution prioritizes the center's research area. The foundation expects the host
  institution's commitment to include a high level of co-financing, which must be described in
  detail in the letter. If the commitment includes the opening of new positions within the
  center's scientific field, they must be described in detail.
- A letter of declaration signed by the proposed center leader that states a full-time commitment to the center. Also included must be a statement that both the proposed center leader and all co-applicants agree on the full proposal and that they have read the Privacy Policy on www.dg.dk. By signing the letter, the co-applicants confirm that they will take an active part in the proposed center's activities.

Before submitting a full proposal, both the proposed center leader and the co-applicants are encouraged to visit the foundation's website <a href="www.dg.dk">www.dg.dk</a> for information on the foundation's Privacy Policy (privatlivspolitik).

### **Assessment Criteria**

In assessing both the outline proposals and the full proposals, the foundation will emphasize the following dimensions:

- The research idea is ambitious and original and has the potential for real scientific breakthroughs in the relevant research field(s).
- The proposed center leader has a high standing in the international research community as well as managerial skills.
- The center includes high-quality personnel in order to establish a creative and dynamic international research environment that will provide an inspirational training ground for young researchers.
- The focus, structure, and size of the proposed center are such that the center sets the stage for scientific ventures that are not feasible within conventional funding from other sources.

#### The Peer-Review Process

The DNRF will send full proposals for external review to three international experts within the relevant research area(s), two of whom are leading experts and one of whom is a generalist within the broader field. The reviewers should possess at least the same international standing as the applicants. Each reviewer is asked to deliver a report of three to five pages addressing a number of crucial questions. Reviewers are not asked to rank or grade the proposal. The Guide for Reviewers, which informs the reviewers of their task, is available for applicants at <a href="https://www.dq.dk">www.dq.dk</a>.

Before the DNRF sends the proposals to the reviewers, both reviewers and applicants are asked to declare a possible conflict of interest. If such a conflict is identified, the reviewer will not be used.

Each applicant may submit the names of three high-level experts, one of whom will be chosen by the foundation to serve on the panel of reviewers who will assess the proposal. The foundation will choose the other two reviewers based on recommendations from external and/or internal sources. Before the foundation assembles the panel, the applicant will be given the opportunity to comment on the list of proposed reviewers' professional complementarity. The foundation has chosen this process in order to ensure that the composition of the expert panel is relevant to the applicant's field of study.

The foundation uses an open and transparent process. Reviewers and applicants will know each other's identities. Applicants will be able to comment on the reviews prior to the board's final selection.

#### **Interview with Applicants**

The board of the DNRF conducts a short interview with each applicant (proposed center leader) prior to the final selection. Interviews for this round of applications are expected to be conducted on May 23-24, 2022. During the interview, the applicant is asked to present the overall research idea and to elaborate on the strategy for realizing the idea.

### **Board Processing and Selection**

The board bases its selection on the full proposals, the three peer reviews for each proposal, the applicant's responses to the reviews, and the interview. The quality of the reviews received is generally very high, and the reviews usually provide valuable advice to the board as well as to the applicants/centers. However, although the reviews serve as very important input to the board's selection, it is the board that makes the final selection. The board has thorough discussions of each proposal, arguing in each case why a proposal should or should not be funded. Ultimately, the board must choose to fund relatively few research proposals from a large number of exceptional proposals.

## **Contract Negotiations**

After the board makes its final selection, the foundation and the center leader initiate negotiations with the host institution regarding significant co-financing, office and laboratory space. It should be noted that no funding is granted before the final contract has been signed. Further information may be requested in this phase, e.g., CPR identification number.

An official inauguration of the new center is held shortly after it starts operating.

### **Overall Time Frame**

The outline proposals must be submitted electronically to <a href="DNRFRound11@dg.dk">DNRFRound11@dg.dk</a>. The foundation must receive all proposals no later than **Tuesday**, **June 1**, **2021**, **at 12 noon**. The application form can be downloaded from <a href="https://www.dg.dk">www.dg.dk</a>.

The board will assess the outline proposals at a meeting on September 1-3, 2021. By mid-September, a number of applicants will be asked to submit full proposals. The deadline for submission of full proposals is expected to be November 22, 2021.

Extensive peer review of each full proposal will be carried out during the winter of 2021-22, and the board will make its final selection on funding at a meeting on May 25, 2022. Prior to making its selection, the board will conduct an interview with each proposed center leader.

The foundation will enter into contract negotiations with the host institutions, and if the negotiations are concluded successfully, new centers may be operating starting in the fall of 2022.