

Process description for the second round

Introduction

The establishment of the Pioneer Centres is an ambitious national initiative which will be executed in close cooperation between the Minister for Higher Education and Science, the Danish National Research Foundation, the Carlsberg Foundation, the Lundbeck Foundation, the Novo Nordisk Foundation, the Villum Foundation and other large private foundations, and the universities.

After gaining some initial experience, the foundations are now ready to start the second round.

First round

The process for the search for, and the appointment of, a panel of international experts to be in charge of academic evaluations etc. has carefully followed the guidelines in the 2019 Implementation Model.

Against this background, the co-funding foundations have invited one of the nominated candidates (within artificial intelligence (AI)) to move ahead with the Danish universities involved. The process of preparing project descriptions (phases 1 and 2), interviews etc. follows the steps described in the Implementation Model.

Second round

The foundations have decided to launch a new second round for the purpose of setting up another 2-3 Pioneer Centres within the two subjects: energy/climate and artificial intelligence; initially two within energy/climate and possibly one more within artificial intelligence. Basically, the key elements of the 2019 Implementation Model are maintained, particularly with respect of requirements and evaluation criteria, budget and co-funding, standard grant agreement, host institution framework, governance, etc.

To ensure a successful new round, adjustments have, however, been made to the search and external academic evaluation processes in particular.

Below is described the adjusted framework, using the same elements as those applied in the original 2019 Implementation Model:

1. Search
 2. External peer review
 3. Requirements and evaluation criteria
 4. Budget and co-funding
 5. Model contract (standard grant agreement)
 6. Host institution framework
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7. Governance/current management
8. Conflicts of interest
9. Project description guidelines

Re 1 Search and project description (phase 1)

The search process of the 2019 Implementation Model (see the model's steps 1-6) was very resource-intensive in the first round and will therefore not be repeated in the second round.

Instead, a direct recruitment process will be used to identify research directors. The process is inspired by international universities, in particular in the US, where it is widely known and accepted that the most qualified research directors do not actively apply for new positions, but are recruited directly. Based on the lessons learned from the first round, the direct recruitment process is considered necessary to achieve the very high ambitions set for the initiative.

The foundations' steering group will prepare a prioritised list of 2-5 potential candidates on the basis of an assessment of the strongest Danish research communities, that is, an assessment of where there is basis for a large venture in light of the candidate's profile. The candidates will be listed on the basis of a preliminary assessment of their ability to meet the requirements and criteria set out in the Implementation Model, considering their academic profiles, CVs etc. At the same time, utmost care will be taken to ensure the greatest possible diversity in terms of gender, age, etc.

The listed candidates will be asked directly about their possible interest in a position as research director. Interested candidates will then be introduced to one or more Danish universities to ensure embeddedness in the Danish research community.

When there is a match between candidate and universities, the candidate will be encouraged to work with the anticipated host university and other participating universities to send the phase 1 project description with a budget forecast as contained in steps 7 and 8 of the 2019 Implementation Model.

Re 2 External peer review

The 2019 Implementation Model laid down a process in which a specially appointed panel of international experts was to assess the academic qualifications and suitability of up to 40 candidates and their projects within the two overall, broad subjects. The process has been used in the first round, firstly for the shortlisting of a wide range of candidates and subsequently for an actual peer review of the selected candidate's project description. In the opinion of the foundations, this model for external peer review is not suitable for the direct recruitment process in the second round, which primarily requires specialist skills in the external peer review.

In the second round, the foundations will instead go back to the efficient model for external peer review used by most Danish foundations. That means that for each candidate who is encouraged to submit a CV and a project description, the foundations will, after having consulted the universities involved and the candidate, appoint three individual external reviewers who will each prepare an individual external peer review. The universities and candidates involved will receive the evaluations in a consultation procedure in accordance with the common practice of the Danish National Research Foundation. This process corresponds to step 9 of the 2019 Implementation Model.

The other steps 10-13 described in the 2019 Implementation Model (page 4) will be followed without changes in the second round.

Re 3 Requirements and evaluation criteria

The evaluation criteria in section 4 of the 2019 Implementation Model were given careful consideration when the model was drafted. The evaluation criteria will be extensively repeated in the second round, but in the light of the lessons learned from the first round, a few adjustments have been made.

The adjusted evaluation criteria have been inserted below and will be repeated directly to the candidates involved and their host institutions/participating universities when they are encouraged to submit the project descriptions for external peer review.

Evaluation criteria

The Pioneer Centre grants will be awarded to a research director who is to lead a group of researchers with an innovative basic research project having clear ambitions for transformative solutions to major challenges faced by society. The candidates must therefore be able to demonstrate their abilities to drive projects with the ambition to fundamentally push the frontiers of research within their discipline.

The candidate's academic profile and exceptionally high professional standard must render it probable that the Pioneer Centre will be able to deliver specific solutions to special challenges faced by society and further develop already existing environments at Danish universities or build up a new academic environment at relevant institutions and thus establish an entirely new field of research in a Danish context.

The Pioneer Centre is expected to involve the best communities in the country across institutions and disciplines – and where relevant, also involve private businesses to help develop the solutions.

Criteria to be met by the research director:

- *The research director must have an exceptionally high research standard in an international class of its own*
- *The research director must have demonstrated a special ability to have visionary research ideas with transformative potential and aiming at changing specific perceptions/paradigms within a given field of research and the potential to develop specific solutions to major challenges faced by society.*
- *The research director must have demonstrated a special ability to successfully have maintained focus on strategic and continuous prioritisation of selected risky projects in his or her research portfolio*
- *The research director and the core group of the research centre must have sufficient experience to establish a creative and dynamic international environment – across institutions and disciplines – which is able to educate the next generation of top researchers.*

- *The research director must be driven by a strong desire to involve and share his or her research with students and young scientists at all levels and previously have demonstrated to possess the talent and passion to do so.*
- *At the same time, the research director must have significant international experience as a research director and be internationally recognised as a top scientist within his or her field of research. Hence, the candidate must also be able to attract the strongest international partners.*

Criteria to be met by the research projects:

- *The overall research idea must be distinctively original and ambitious.*
- *The overall research idea must make probable a potential to meet the expectation for fundamental, scientific breakthroughs and contribute to the solution of major challenges faced by society both in the short (within 5-7 years) and the long view (10-15 years).*
- *The overall portfolio of the research project must include risky projects. It will be weighted positively to render probable that exactly these risky projects have particular potential to promote the research portfolio's chances of scientific breakthroughs and solutions for society.*
- *The project idea must demonstrate the commitment of the research director to the specific project as well as the connections and ambition to involve all strong/relevant research communities in Denmark, including (if possible) all main fields.*
- *It will weigh positively in favour of the project if it involves Danish businesses to the extent that they are able to contribute solutions to challenges faced by society. Importance is attached to the ability to involve specific businesses without rendering it difficult to involve others.*

Re 4 Budget and co-funding

The 2019 Implementation Model with Appendix 1 ((Cost types re. Pioneer Centres) meticulously describes the terms and conditions applicable to budgets and co-funding.

No changes have been made to these terms and conditions.

Re 5 Standard Grant Agreement

The standard grant agreement in Appendix 2 to the Implementation Model will be followed without changes in the second round.

Re 6 Host institution framework

Under the 2019 Implementation Model, the general rule is that there is one host institution. In accordance with the adjusted evaluation criteria, it is made clear in the process for the second round that the Pioneer Centre is expected to involve the best research environments in Denmark across institutions and disciplines – and where relevant, also involve private undertakings in the development of solutions.

Re 7 Governance/current management

The 2019 Implementation Model makes a number of very specific governance requirements. No changes are made to these requirements in the second round.

Re 8 Conflicts of interest

The separation of tasks and roles in the 2019 Implementation Model is not fully maintained in the second round where the foundations recruit potential candidates directly. As stated above, there will, however, still be an external peer review of the individual candidates.

In connection with the consideration of the specific applications, all foundations and reviewers must observe the general rules on conflicts of interest. According to the Implementation Model, the binding guidelines issued by the Independent Research Fund Denmark (DRF) on conflicts of interest will apply to the initiative (see Appendix 6 to the 2019 Implementation Model). They will continue to apply in the second round.

Re 9 Project description guidelines

The 2019 Implementation Model has laid down guidelines for the project description in Appendix 6. These guidelines have been supplemented as necessary, and the guidelines have been implemented in the template prepared by the foundations for the submission of the project description for phase 1 in the first round.

Also, in the second round, the individually recruited candidates and the universities in which the candidates will be anchored will receive detailed templates for their submission of project descriptions etc.