Grand Solutions: Green Research, Technology Development and Innovation

Investment in projects developing knowledge-based and interdisciplinary solutions for specific societal challenges, which – short or long term - will create growth and employment in Denmark.

Who?
Companies, research institutions, public institutions, etc. in Denmark or abroad.

What?
Co-financing of up to 75% of the total cost of the project. For example, salary, procurement (apparatus, materials, equipment, etc.), other project costs (events, travel, dissemination, etc.), external services (e.g. consultancy or services).

How much?
Total budget in 2021: approx. DKK 100 mio.

Grand Solutions: Typical duration is 2-5 years

Innovation Fund Denmark (IFD) invests in ambitious and targeted strategic research and innovation projects that create and implement new solutions, technologies, behavioral changes and valuable new knowledge.

IFD co-finances projects in the field of green transformation, preferably with a transdisciplinary approach across natural sciences, humanities and social sciences, which based on "state of the art" (globally) and a dedicated and efficient consortium can create large societal value and will have a significant positive impact on the green transition.

Aim

Denmark and the rest of the world is facing massive climatic challenges in relation to e.g. rising temperatures, melting sea ice and more extreme weather, and a significant reduction in emission of climate gasses is required. Simultaneously, we are facing large challenges in relation to nature, the environment and biodiversity. Technology development and innovation play crucial roles in enabling us to achieve the necessary green transition.

The themes for this Grand Solutions call are defined on the basis of the "2021 Agreement on the allocation of the research reserve" and the Governmental Strategy for the "Green Solutions of the Future" (links inserted below). The Call aims to contribute to the green transition while at the same time taking considerations to nature, the environment and biodiversity and a more sustainable society into account, thus enabling Denmark to fulfill the governmental target of a 70 percent reduction in greenhouse gas emissions in 2030 and CO_2 neutrality in 2050.

The funds for technology development and innovation will be allocated within the green transition in a broad sense, with the aim to create societal value and/or economic growth for private and public companies and/or society. The research, must, to the extent possible, be carried out in close interaction between research institutions and the business community.

Investment Strategy

Innovation Fund Denmark invests in projects at all stages of the research and innovation value chain. Thus, IFD invests in the early strategic research project, where targeted efforts and cooperation with the most competent international and/or Danish partners from relevant scientific and professional disciplines are crucial, as well as in the good project that lacks the final steps towards successful implementation and introduction into market/society.

Innovation Fund Denmark's investments do not necessarily take a project all the way to commercialization. It is therefore crucial that the project parties themselves are able to lift the result onto the market or otherwise ensure commissioning - or have investors/end-users who can take over the project implementation after Innovation Fund Denmark's investment period.

Innovation Fund Denmark emphasizes that solutions for the green transition, in addition to natural and technical sciences, also include humanistic and social research and innovation that can contribute with valuable knowledge related to e.g. behavior, incentives, regulation and market conditions.

The 2021 Agreement on Allocation of the Research Reserve, recommendations from the government's climate partnerships 2019 and Forsk2025 contain many recommendations on how to enable the green transition. IFD would like to invest in projects that include climate solutions, technologies and behavioral changes that will provide the maximum effect on CO_2 emissions and the climate - not only in Denmark, but globally.

Specifically, Innovation Fund Denmark would like to invest in projects within the green transformation, which are part of a broader societal and behavioral context, within the following subthemes:

- Energy Production and Storage
- Energy Efficiency
- Agriculture and Food Production
- Transport

- Environment and Circular Economy
- Nature and Biodiversity
- Sustainable behavior and societal consequences (cross-cutting and not as a separate theme)

Innovation Fund Denmark places special emphasis on the role of agriculture in the green transition, e.g. in relation to both organic and conventional farming and the development of new sustainable, animal and not least plant-based foods. In addition, Innovation Fund Denmark would like to see a cross-disciplinary focus on technological opportunities within the seven themes, including e.g. digitization and artificial intelligence.

Innovation Fund Denmark also places special emphasis on the field of energy, including energy production, energy storage, energy efficiency as well as coherent energy systems and the potential for sector coupling across the overall energy area. Innovation Fund Denmark also emphasizes that sustainable construction, including the use of sustainable materials, is an important area.

Innovation Fund Denmark finds it important to focus on the Arctic and Arctic research, among other things, in relation to climate change and climate monitoring. Finally, Innovation Fund Denmark places emphasis on research into societal changes caused by climate change, including e.g. related international conflict management.

Technology development and innovation play a crucial role in achieving the goals for the green transition in Denmark and the rest of the world. Innovation Fund Denmark therefore also wants to invest in projects supporting the translation of relevant existing knowledge into concrete green technologies and solutions in close collaboration with the business community.

Assessment Criteria

The overall rating criteria are:

- Quality of research and innovation
- Value creation during and after the project period
- Efficiency in project execution
- Implementation of project results

In connection with applications for Grand Solutions 2021 “Green Research, Technology Development and Innovation”, special emphasis is placed on quantifying (as far as possible) the project's contribution to reducing CO_2 equivalents/greenhouse gases - in Denmark and globally. The value creation in the project must not only be understood as monetary value, but can also encompass e.g. improved quality of life, cleaner environment etc. It is the responsibility of the applicant to describe the different aspects of value creation from the project.

Specifically, the assessment of the applications are based on the qualities of the project. In terms of research and innovation, this includes a global perspective, in relation to an articulated or latent need, state-of-the-art, directly competing or closely related scientific, behavioural or technological solutions, the scalability of the solution, technical, regulatory and market risks and the risk management as well as the feasibility of the project plan.

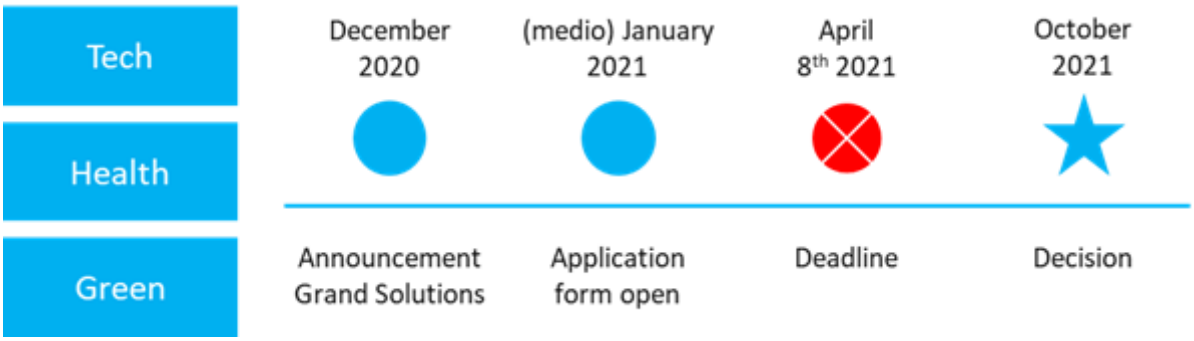
In addition, efficiency in terms of the rate of project development, the effective use of invested resources, managerial and professional skills and the subsequent effective implementation of the project results, nationally and/or globally, will be carefully evaluated. The value creation of the project will be assessed in relation to the size of the investment.

Likewise, emphasis will be placed on the project's beneficiaries/end-users and core stakeholders involvement and engagement in shaping the project, participating in the project or otherwise being directly involved in the project, e.g. through an investment in the implementation of project results.

In addition to these assessment criteria, reference is made to the "Guidelines for Grand Solutions 2021" and the distribution of the research reserve 2021.

Assessment Process

Applications for Grand Solution must be submitted via e-grant, which is Innovation Fund Denmark's application portal. The assessment process is outlined below. It is a one-phase application with potential interview:



Innovation Fund Denmark's Board of Directors decides which applications will proceed for peer review and invited for an interview with Innovation Fund Denmark. Prior to the interview, the peer reviews will be made available for consultation with the applicant.

Final decision to application will be at the end of October 2021, with project launch in the 4th quarter of 2021.

The Board of Directors' decision on either rejection or invitation to an investment agreement negotiation will be notified to the applicant via e-grant.