

The Construction and Building Sector's Transition to Circular Resource Economy

Application deadline 18 August 2020, at 12:00 noon

Grand Solutions: Typical duration is 2-5 years

The budget for 2020 is approximately DKK 40 million, including approximately DKK 3 million for activities across the projects.

Together, Realdania and Innovation Fund Denmark want to promote green transition and growth in Denmark by investing in value-adding research and development projects for transition of the construction sector to circular resource economy.

As a philanthropic association with a mission to create increased quality of life through the built environment, Realdania is deeply engaged in the promotion of sustainable cities and sustainable construction. In recent years, Realdania has supported exemplary construction, practice-related research, development projects, standardisation work and networks within circular construction. But the big shift to a situation where the circular solution is a more widespread choice than the linear one is still waiting ahead.

Purpose

Realdania and Innovation Fund Denmark's aim with this call is to invest in research and innovation projects that contribute to the transition of the construction sector (hereafter referred to as the 'sector') to circular economy, as part of the green transition of society. The projects shall help the sector to significantly reduce the resource consumption, the embedded energy consumption and greenhouse gas emissions, at the same time offering a business potential.

The research shall strengthen the efforts in the entire value chain from research to development. The green transition, including circular economy, will require targeted efforts over several years. The efforts shall therefore also contribute to the building of competence and capacity in the Danish research sector.

As a tool to achieve this aim, Realdania and Innovation Fund Denmark are establishing a collaboration platform under the auspices of BLOXHUB for the selected projects in order to promote shared inspiration, exchange of experience and value creation.

Investment Strategy

Realdania and Innovation Fund Denmark invest in projects at all stages of the research and innovation value chain. Thus, we invest in both the early strategic research project, where targeted efforts and collaboration with the most competent international and/or Danish partners from relevant disciplines are crucial – and in the good project that lacks the final steps to be ready for successful introduction to the market or for commissioning.

The investment does not necessarily accompany a project all the way to commercialisation/commissioning. It is therefore crucial that the project parties themselves are able to lift the result onto the market or ensure commissioning – or have customers who can invest in or take over the project following Innovation Fund Denmark's investment period.

The transition of the construction sector to circular economy requires interdisciplinary solutions with input from the technical/natural sciences as well as the social sciences and the humanities. Realdania and Innovation Fund Denmark emphasise that the implementation reflects the necessary interdisciplinary breadth and competencies to lead the process toward circular practice.

It will also be emphasised that the projects are holistic in coherent innovation and value chains or that, within their research and development boundaries, they are precisely associated with the totality and the values for which the results are to be used.

The call is based on 'Agreement on Allocation of the Research Reserve for 2020', 'the Finance Act for 2020', the 'Advisory Board for Circular Economy 2016' and the government's 'Strategy for circular economy' from September 2018. On this basis and taking as a starting point the applicants' in-depth understanding of the construction sector and their insight into international development, Realdania and Innovation Fund Denmark want to invest in projects that can create solutions to effectively transform the sector to circular resource economy. The aim is to reduce resource consumption and emissions of CO₂ equivalents with effects on the climate, not just in Denmark, but globally.

The frames for the projects are very broad as long as the projects clearly address both a supply and a demand aspect. We expect projects with solutions that can be developed on an industrial scale based on common methods of design, operation, screening and materials handling. We see the need for circular solutions supported by digital structures for market platforms and business models, including digital solutions for traceability. We also think of possible models for risk-sharing by testing and introducing circular materials and construction systems and for developing new forms of ownership, contractual relationships and business models that make it attractive for end users to demand circular solutions. With respect to the strategic relevance of the projects, the applicants must position their project in relation to Danish and international research and development projects (state-of-the-art).

Assessment Criteria

The overall assessment criteria are:

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

It will be emphasised by Realdania and Innovation Fund Denmark that the projects create measurable value and contribute to sustainable development for Denmark. Thus, the projects must have considerable potential and result in new solutions, methods and business models: The partners must explain the specific quantitative value creation of their project. Value creation is broadly understood as targeted activities that lead to increased growth, employment or other value-adding measures, e.g. development of new products and services, increased productivity, lower societal costs, reduced resource consumption, reduced environmental impact, reduced greenhouse gas emissions, better quality of life and a solution to significant societal problems. It is the responsibility of the applicants to explain the different types of value creation.

Specifically, the applications will be assessed on the projects' research and innovation qualities in a global perspective and in relation to a concrete or latent need, state-of-the-art, directly competitive or obvious scientific or technological solutions, scalability of the solution, technical, regulatory and market risks, risk management of the project plan and the viability of the projects.

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

It will also be emphasised that the individual project's customers and core stakeholders help to shape the project and actively participate in it.

In addition to these assessment criteria, please refer to 'Guidelines for Grand Solutions 2020' as well as 'Agreement for the Allocation of the Research Reserve for 2020'.

The allocation of funds is based on the 'Finance Act for 2020'.

The allocated financial frames are expected to enable investment in 3-4 projects of 2-5 years' duration. The selected projects agree to participate in and contribute to the joint collaboration platform which will be built based on the projects under the auspices of BLOXHUB.

The Assessment Process

Applications for Grand Solution must be submitted via e-grant which is Innovation Fund Denmark's application portal.

The assessment process is a one-phase application with interviews of selected applicants:

The Board of Innovation Fund Denmark will decide which applications will be submitted for peer review and invited to an interview. Prior to the interview, the peer reviews will be sent to the applicants via e-grant, as a consultative procedure. Representatives from Realdania will participate in the assessment process on an equal footing with Innovation Fund Denmark, while the final decision will be made by the Board of Innovation Fund Denmark. The applicants will be consulted on assessments received from Realdania to the extent required by the Public Administration Act.

Selected projects will be invited to interviews in October 2020. Projects that are not invited to interviews will be notified in September 2020. The final response to the applications will be available at the end of November 2020 with project start in the first quarter of 2021.

The decision by Innovation Fund Denmark's Board on either rejection or invitation to negotiations about an investment agreement will be submitted to the individual applicants via e-grant.

Guides – links

- [Guidelines for Grand Solutions 2020](#)
- [Guideline to e-grant](#)
- [The Finance Act 2020](#)
- [Agreement on the Allocation of the Research Reserve for 2020](#)
- [Research2025 Catalogue](#)
- [Innovation Fund Denmark's Climate Panel's Report](#)
- [Innovation Fund Denmark's Investment Strategy for Bioresources, Environment and Energy](#)
- [Innovation Fund Denmark's General Investment Strategy](#)
- [The UN's 17 global goals for sustainable development](#)
- [Advisory Board for Circular Economy \(2016\)](#)
- [The Government's 'Strategy for Circular Economy' \(2018\)](#)

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