

Grand Solutions

The Construction Sector's Transition to Circular Resource Economy

Agenda

- 1) **Grand Solutions general guidelines**
- 2) Grand Solutions Special Call 2020: The Construction Sector's Transition to Circular Resource Economy
- 3) Tips and tricks
- 4) Wrap up and next step

Grand Solutions

The general guidelines

Visionary and Ambitious Research and Innovation Projects

The entire value chain – from strategic research to implementation.

High risk profile and focus on ambitious results.

Large investments – typical from DKK 5 million and up.

Duration: two to five years.



Typical Partners

- Universities and hospitals (Danish and foreign)
- Danish university colleges (Danish and foreign)
- Businesses (small/large, private/public, Danish/foreign)
- GTS institutes (Danish and foreign)
- Authorities (Danish and foreign)
- Regions and municipalities (Danish and foreign)

One of the **Danish** project participants must act as the applicant organisation



Finances and budgeting

Bottom up – builds on activity based cost distributed to responsible partner and dedicated to relevant work package.

Check IFD guidelines for maximum investment rates, co-financing and other budgetary rules.



Application preparation

The application must be submitted via www.e-grant.dk

The following **appendices** must be attached to the electronic form:

- Budget: excel file (mandatory)
- Appendix A: Figures, pictures, tables, etc. (optional)
- Appendix B: Partner motivation (mandatory)
- Appendix C: Key persons (mandatory)

Language: English

Assessment criteria

The overall assessment criteria are **QVEI**:

Quality of research and innovation

Value creation during and after the project period

Efficiency in project execution

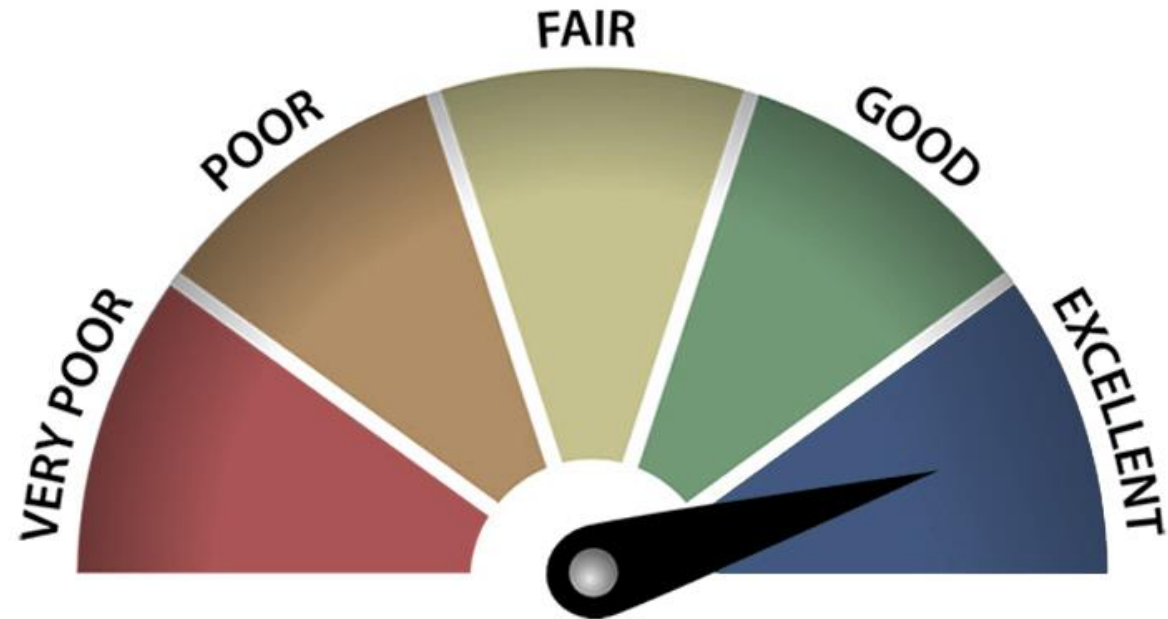
Implementation of project results



Q – as in *Quality*

Quality of research and innovation

- Needs and challenges?
- Compared to State of the Art?
- Why will you succeed?
- Methods and innovative solutions?
- Strategic relevance?



Definition of "Innovation": *The process of converting knowledge into value*

V – as in *Value Creation*

Value creation during and after the project period

- Quantitative measures
- Value can be more than the direct monetary value (sales, profit or export)
- Any IP issues?
- Less environmental footprint
- Reduces resources, etc.



E – as in *Efficiency*

Efficiency in project execution

- Project leader competencies
- Logical plan with work packages
- Focused risk reduction
- Clear and quantitative milestones
- Use of proceeds
- Governance model

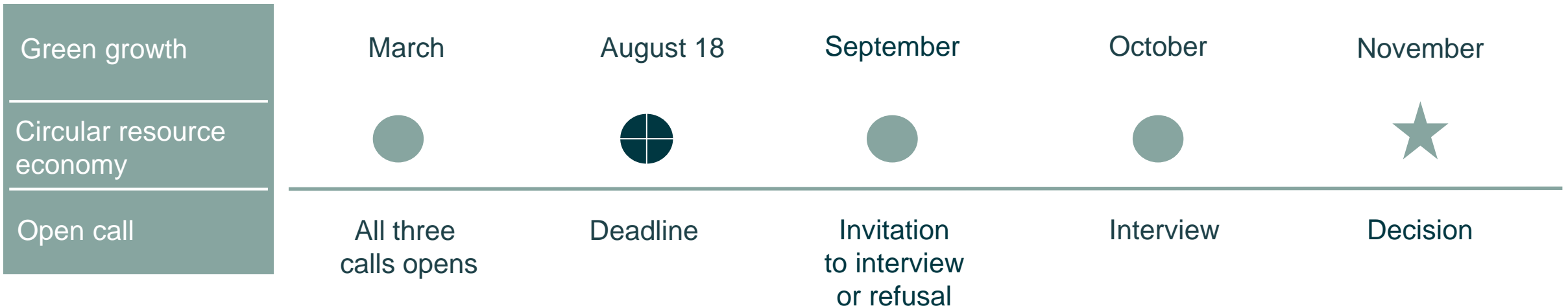


I – as in *Implementation*

Implementation of project results

- Who will take over after the project ends?
- Is the value creation and risk reduction enough for the next investor or recipient?
- Other barriers for implementation?

Grand Solutions – timeline 2020



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Grand Solutions – Special Call 2020

The Construction Sector's Transition to Circular Resource Economy

Partnership behind the Grand Solutions Special Call

Partners:

- IFD is Denmark's public fund aiming to lift strategic research and innovation projects throughout Denmark.
- Realdania is a philanthropic association working to improve the quality of the life for all by developing the built environment.

IFD and Realdania co-fund each DKK 20 million to this Special Call.

Mutual understanding: the construction sectors' shift to a circular resource economy is a huge challenge, calling for grand solutions.

IFD's experiences with leading knowledge institutions combined with Realdania's network with innovative companies nourish the expectation for groundbreaking projects.

Key figures regarding the construction sector

- At the global level, the construction sector accounts for 40 percent of total CO2 emissions
- Of these, building materials account for 11 percent.
- Construction accounts for 20 percent of Denmark's total CO2 emissions.

However, that number only covers energy consumption for heating and operation of the buildings. To this must be added embedded energy for the production of materials, transport to the construction site and production on the construction site. Here, there is not yet an exact measure for Denmark.

- 38 percent of Denmark's waste production comes from the construction industry.

Purpose

Aim: to contribute to the transition of the construction sector to circular resource economy.

And to reduce the resource consumption, the embedded energy consumption and greenhouse gas emissions – and at the same time offering a business potential.

Research \longrightarrow Development

The efforts shall therefore contribute to the building of competence and capacity in the Danish research sector



Thematic focus

Examples on what could be focused on (only for inspiration, not an exhaustive list):

- Circular solutions supported by digital structures for market platforms and business models.
- Risk-sharing by testing and introducing circular materials and construction systems
- New forms of ownership, contractual relationships and business models that make it attractive for end users to demand circular solutions.

Focus on commercialization: Address both a supply and a demand aspect.

Rather solutions that can be developed on an industrial scale than niche-projects.

Collaboration

Interdisciplinary solutions

- We emphasize that the implementation reflects the necessary interdisciplinary breadth and competencies to lead the process toward circular practice.

Collaboration with the other projects (knowledge sharing, mutual dissemination, participation in common inspirational events etc.)

- Parallel to the Industrial Researcher Team

Collaboration platform and physical meet-up hub at **BLOX HUB**

Investment strategy

Interdisciplinary solutions at all stages of the research and innovation value chain

The investment does not necessarily accompany a project all the way to commercialization

International aspects

The applicants must position their project in relation to Danish and international research and development projects (State-of-the-Art)

Expected number of projects and investment size per project within the Special call:

- 3-4 projects
- Around DKK 10-15 million

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Tips and tricks

What we look for in a good application

- An excellent team with high level competences (globally)
- A real need to the proposed solution
- Quantified value creation and business model
- A partnership with a common goal – just the needed partners to reach the goal
- Governance – clear roles, responsibility and decision making process
- Detailed and focused plan with clear and quantitative milestones
- Who takes responsibility for the next step?

All 4 criteria are important – but the balance in our evaluation shifts according to TRL/SRL level

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Wrap up and next step

Next step: Pre-pitch (May 28 2020)

Call text is available at Innovation fund Denmark's homepage ([DK](#), [UK](#))

Guidelines for Grand Solutions is available at Innovation Fund Denmark's homepage ([DK](#), [UK](#))

Q&A for the Grand Solutions Special Call is available at Innovation Fund Denmark's homepage ([DK](#))

Questions about

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