



The Danish Council for Strategic Research – a presentation

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The Danish Council for Strategic Research

What is strategic research?

- Research within tematically defined and politically prioritised areas
- Research that contributes to the solution of key challenges in society
- Interdisciplinary research
- Research in cooperation with potential users, e.g. private companies or public institutions
- Basic research and applied research

Vision



The Danish Council for Strategic Research undertakes to promote and advance research with high international impact, which is **focused on key challenges in society and which will potentially contribute to increased national economic growth and welfare.**

Principles

- Freedom regarding choice of methods within research
- Cooperation across research areas
- Cooperation with the relevant governmental and private participants
- Strengthened international research cooperation
- Consideration of relevant environmental, health-related and ethical problems
- Good research leadership
- Research within established or completely new research areas (willingness of taking risks)
- Openness and visibility – active communication towards a broad public audience.

Instruments

Strategic
research
centres

> 4 M€
Duration 5-7
years

Strategic
research
alliances

2-3 M€
Duration about 5
years

Strategic
research
projects

> 1,5 M€
Duration 3-5
years

SPIR (Strategic
Platform for
Innovation and
Research)

About 8 M€

The Danish Council for Strategic Research
gives large and long-term grants

In cooperation with
the Danish Council
for Technology and
Innovation
(RTI)

Instruments

- Whichever instrument is chosen, research institutions can participate with relevant public and private actors
- The Council employs instruments based on substantial and long-term funding (20 million DKK in average) in order to achieve the best potential for a significant impact of the research results.



Strategic research centres

- Focused environments of a high scientific standard with great strategic significance and a societal and commercial potential
- Flexibility is emphasized; dynamic research activities that permit new, relevant focus areas to be defined during the process

Requirements to centres:

- Research management
- A steering group consisting of both male and female members must be established
- Engaged in binding international partnerships
- Intensive and binding collaboration with relevant public and private sector actors
- Time frame of approximately 5-7 years
- Funding from the Strategic Research Council up to 4 M€. Significant co-financing is expected from the participating parties.

Strategic
research
centres

> 4 M€
5-7 yrs

Strategic research alliances

- Focused research environments and establishment of stronger research alliances with a high scientific standard
- Alliances between existing Danish research environments or between Danish and international research environments

Requirements to alliances:

- Research management
- A steering group consisting of both male and female members must be established
- Binding collaboration with relevant public and private sector actors
- Financing research activities – a small share of the funding can be spent on networking activities
- Time frame approximately 5 years
- Funding from the Council amounts to 2-3 M€. Co-funding is expected from the parties of the research alliance.

**Strategic
research
alliances**

**2-3 M€
5 years**

Strategic research projects

Requirements to projects:

- Participation of public and private sector parties
- Development of interdisciplinary expertise
- Projects must promote innovation among users in the public and private sectors
- The projects are required to create a basis for future international strongholds
- Time frame is 3-5 years of duration
- Funding from the Council amounts to at least 1,5 M€. Co-funding is expected from the participating parties.

Strategic
research
projects

>1,5 M€
3-5 years

Strategic quality



- **Applications are evaluated on the basis of:**
- The relevance of the research
- The potential impact of the research
- The quality of the research

The relevance of the research



- The bearing of the hypotheses or research issues on the societal challenge that forms the basis for the research theme.
- Assessment of whether the method of research is well-suited for the investigation of the issue in question.
- The involvement of private and public sector actors in the process of formulating issues and challenges to be addressed and in the ongoing research activities.
- Incorporation of a sufficient body of expertise on the issues to be addressed, including interdisciplinary expertise.

The potential impact of the research

- The potential of the research to stimulate value creation in the public and private sectors
- The potential of the research to contribute to improvements in the welfare society
- The expected contribution of the research to an improved knowledge base for society's decision-making and services
- The contribution of the research to the advancement of master and PhD programmes and research training as well as raising the standard of education generally
- The contribution of the research to international collaborations
- The expected stimulatory effect of the research on innovation.



The quality of the research

- The originality of the application and expected performance in international comparison
- The originality and innovativeness of the hypotheses and research issues
- The theory applied and the research methods employed
- Development potential and international positions of strength
- The international reputation of the researchers
- Publications, patents, licensing agreements and citations
- The research manager's track record in research management.



Characteristics of strategic research



Peer Review Panel

- The Danish Council for strategic research has a peer review panel
- The panel consists of approximately 400 members
- The panel is supplemented by other researchers in order to ensure the most optimal expert evaluation
- The international peer reviewers are asked to assess the scientific quality and scientific relevance of the projects.



RESEARCH2020

A new catalogue with propositions for strategic research themes

- Produced in dialogue with a broad range of stakeholders
- Reflects the research areas that are the most promising for Denmark in the coming years
- To be used by politicians as basis for the prioritisation of strategic research themes.



Impact assessment

- The main goal of companies participation in the Councils research activities is to **generate knowledge on a high level rather than specific product development**
- Almost 90 percent of the research institutes participate in strategic research projects to **become leading within their field** while that is the case for nearly 60 percent of the companies
- Almost all participants in the the projects assess that **participation in a strategic research project strengthens the applied research**
- At the same time nearly 70 percent of the participating research institutes indicate that participation also **strengthens the quality of their basic research.**



Interdisciplinarity

- More than **2/3 of the projects** in the Council cross scientific areas of research
- **The benefits** by interdisciplinary research are according to the researchers more effective problem solving and a strengthened potential for applying the results
- **Challenges are** that an interdisciplinary collaboration requires strong management and there can be institutional barriers
- **Research training** must be academically founded but an interdisciplinary element strengthens the width and relevance of PhD.-courses.
- Interdisciplinary research can be more difficult to **publish** in highly cited journals but can on the other hand yield generally increased opportunities of publication.

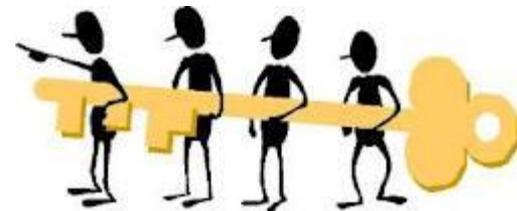


Competition promotes cooperation

According to an analysis of the Council's grants, in 2011 an average grant from the Danish Council for Strategic Research had:

- Nearly 4 participants from Danish **research institutes**
- 2 participants from **private companies**
- 2 international participants from **foreign research institutions or companies**
- 1 other actor, e.g. **public organisations.**

One of the advantages of making research funds subject to competition is that it **encourages researchers to collaborate** in order to ensure the highest quality.



Public-private cooperation

- **Private companies participate** in nine out of ten of DCSR's grants, primarily to gain access to the newest knowledge
- 73 % of the companies believe that participation in a research activity funded by the DCSR has lead to **strengthened cooperation with universities in general**
- 80 % of the researchers think that participation of private companies has increased **the applicability of their research**
- 64 % of the grant holders believe that their participation in a DCSR-grant has **strengthened the researchers' cooperation with private companies**



Innovation and value creation

- Inclusion of public and private users **strengthens the applicability of research**
- 70 % of the participating companies believe that participation in a strategic research activity has encouraged them **to carry out research that would not have been carried out otherwise**
- 51 % of the companies think that their participation in a strategic research activity has provided their company with **new or strengthened R&D competences**
- Also **considerations about commercialisation and new development opportunities** within the companies
- 32 % of grant holders in finished grants think that completion of a research activity funded by the DCSR has contributed to the preparation of **new or improved processes in the public sector.**

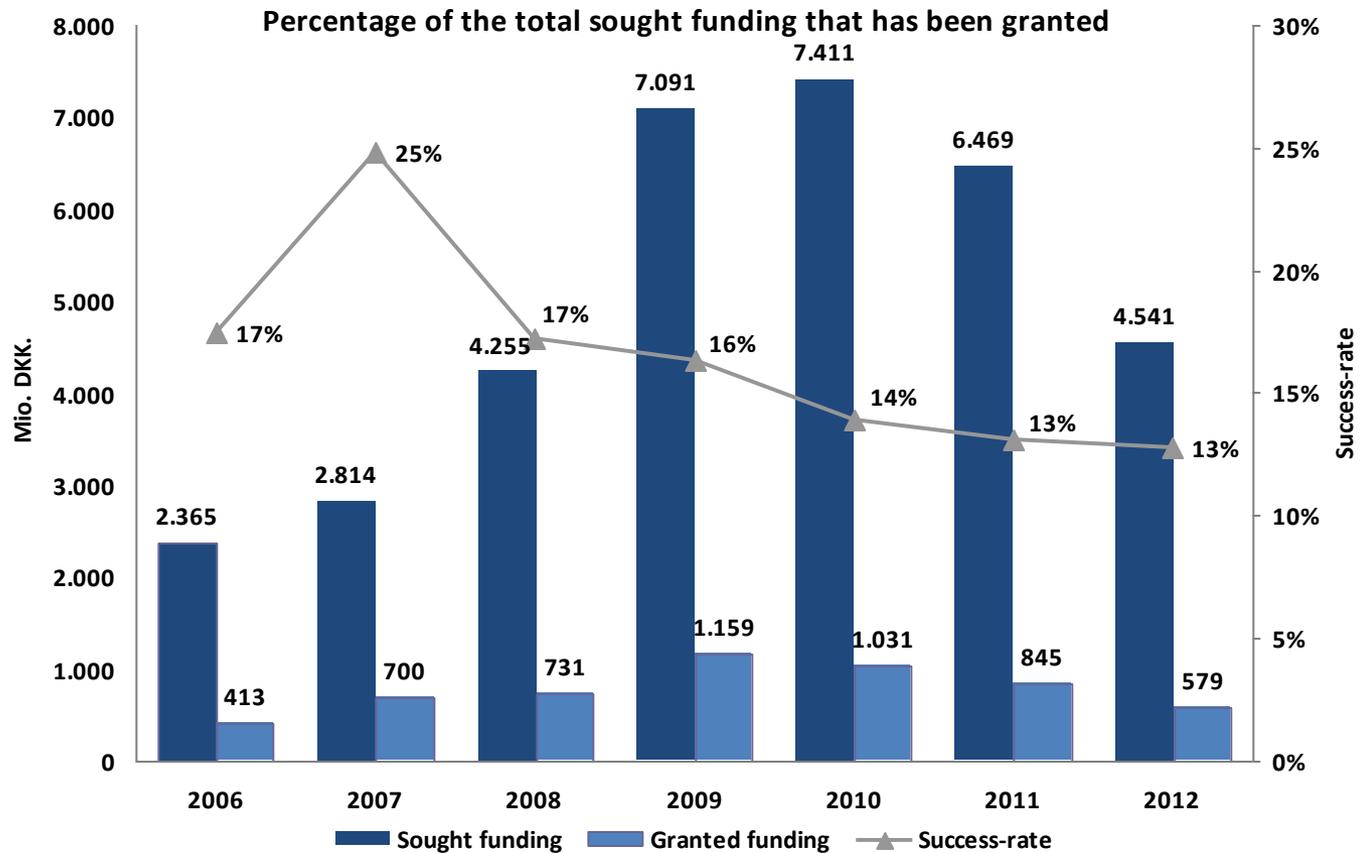


Strategic research contributes to education of a high standard

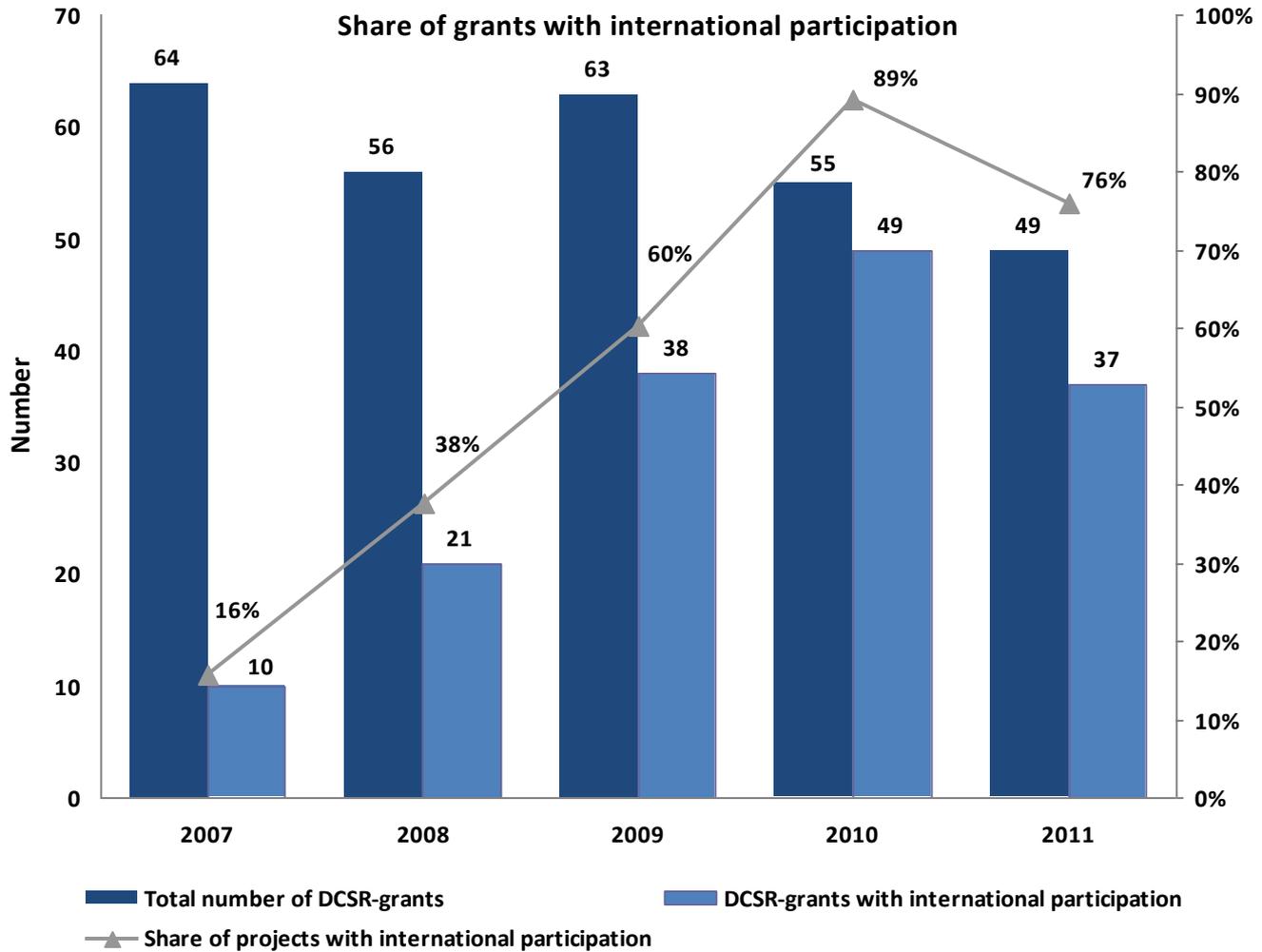
- Investments in strategic research have a **spill-over effect on education**
- Strategic research contributes to higher education with **new and relevant research-based knowledge**
- Between 2008 and 2012 the DCSR has funded **465 PhD scholarships**
- Strategic research makes teaching **more labour market oriented**
- Strategic research contributes to **a generally increased multidisciplinary** in research which has a spill-over effect on teaching
- A source of **brand new educational programmes**, e.g. a master programme in human nutrition



Success rates 2006-2012



International participation





Thank you for your attention!