

Joint Nordic Call

Call for proposals – Sustainable Renovation

The purpose of this call is to generate joint Nordic research and innovation activities within sustainable renovation of the built environment. The call provides opportunities for researchers and industries to take part in multilateral cooperation in the field of sustainable renovation.

The call is launched by funding organisations from Finland, Sweden, Denmark, Norway and Nordic Innovation Centre (the call secretariat).

Timetable

Publication date: May 2008

Deadline for proposals: 15th of September 2008 at 15:00 (CET)

Evaluation of proposals: October 2008

Funding decisions: December 2008

Budget

	2 850 000 €
- Finland, Tekes	500 000 € + funding for companies
- Sweden, Formas	500 000 €
- Sweden, Swedish Energy Agency	350 000 €
- Denmark, EBST	500 000 €
- Norway, RCN	500.000 €
- NICE	500 000 €

Restrictions to Participation

See parts on eligibility of participants under national conditions.

Background

The construction industry is one of the largest sectors in the economy. Through innovation the sector can increase its productivity, thus having a large positive impact on the economy. Due to the size of the construction sector, it also plays a crucial role in making the society more sustainable.

The construction and real estate sector has significant environmental impacts. It is the second largest contributor to greenhouse gas emissions and it accounts for around 42 percent of all energy consumption in Europe. Furthermore, the construction sector is responsible for 40 percent of the total flow of raw materials in the global economy. At the same time, buildings form a considerable part of the national property. The quality, functionality and condition of the building stock have direct affects on the well being and performance of individuals and may thus also create a competitive edge to companies.

One of the main challenges confronting the European construction and real estate sector is maintaining and upgrading the built environment to meet the changing needs of the inhabitants, users and owners. Need for renovation may rise for example from poor energy performance, indoor air quality problems, moisture problems and mould growth, poor comfort, exceeded service life of building components or demand for

more sustainable neighbourhoods and areas. Urban renewal could be seen as an opportunity for sustainable renovation.

Existing buildings are replaced at very low rate – only 1-2 percent each year – and often too little and partly insufficient renovation activities take place to transform the building stock into a more sustainable state. Recognized barriers to renovation are for example lack of knowledge, experience and good examples, inappropriate processes and products, missing incentives or lack of cost effective investments.

Maintenance and renovation are significant elements of a sustainable built environment. The emphasis in construction is moving from new buildings towards maintenance and renovation. Already now the number of buildings that are renovated each year exceeds the number of new buildings in Europe. Growing renovation rates mean that improvement of technologies and processes are needed to meet the market demands.

Overall Goals and Objectives

The overall goal is to support research and innovation for balanced and sustainable development within the built environment and sustainable economic growth of society. The research area *Sustainable Renovation* not only relates to energy efficiency issues but also covers a wider scope of environmental, social, cultural, economic and institutional aspects.

ISO TS 21929

Sustainable building achieves the required performance with the minimum of environmental impact. At the same time sustainable building encourages economic, social and cultural improvement at a local, regional and global level.

The objectives of the call are:

- to support research and innovation in order to make the built environment more sustainable
- to enhance sustainable renovation activities and thus contribute to a more energy-efficient and user-friendly building stock in Europe

Possible Research and Innovation Themes

Proposals should cover at least one of the following call themes:

1. Business concepts of sustainable renovation *for example for contractors, service providers, building owners, clients or building developers*

The enabling technologies for energy-efficient and sustainable renovation already exists to some extent, but often integration of technologies, processes and services is needed to bring about large-scale business activities. New business concepts that enable cost efficient and sustainable renovation of existing building stock could be researched and developed under this theme.

As inspiration for proposals, the following issues could be considered:

- Business concepts which include identification and reduction of market barriers, contracting issues or Life Cycle Cost thinking
- Models to overcome the owner-/user-dilemma, behavioural, organizational or financial barriers to sustainable renovation

- Business concepts which include improving or reengineering the renovation processes
- Concepts that address energy renovations in residential buildings such as single family houses and apartment buildings

2. Creating a sustainable built environment

Urban renewal could be an opportunity for sustainable renovation if decisions on asset management were related to the technical quality of the buildings, which is often not the case.

As inspiration for proposals, the following issues could be considered:

- Socio-economic challenges of urban renewal of areas or over all functionality and need for refurbishment of existing areas
- Incentive structures regarding how to encourage stakeholders to shared responsibility towards improved energy performance in buildings and communities
- Scalable solutions for renovation of areas and related services like energy supply, waste management systems etc.
- The incorporation of sustainable renovation with enhanced architectural solutions aiming at an over all improvement of the built environment

3. New technologies *for example for envelope, building services, ventilation, etc.*

Further development, integration and implementation of renovation technologies is also needed to achieve better resource efficiency of the built environment. Especially research and innovations of retrofit techniques, prefabricated elements and processes are lacking.

The development of technology should rather be embedded in the previous two themes than be a main theme itself.

As inspiration for proposals, the following issues could be considered:

- The relationship between renovation processes and the creation of a healthy indoor climate
- Sustainable renovation reducing the energy consumption to the level of new low energy buildings

Cross cutting themes in this call are:

- Life cycle costing and life cycle analyses in facilitating sustainable renovation
- Demonstration of benefits through calculation methods or demonstration projects
- Integration of different disciplines, encouraging multidisciplinary research
- New business models and cooperation
- Speeding up the implementation
- Government policies and measures to enhance sustainable renovation of buildings – economic incentives, regulations and removing of barriers
- Legal systems to assure the responsibility for the environmental and sustainable qualities of buildings and construction products – and liability for failures

Structure of proposals/Application Requirements

The proposal must consist of two parts: A common application form describing the whole project and relevant national application forms for the respective national parts of the project. Each partner must send a full proposal (B) to the national funding organisation. Additionally the coordinator should send copy of the common project plan (A) to the secretariat (Nordic Innovation Centre).

Application procedure

Application form for the common proposal can be found at www.nordicinnovation.net

National application forms can be found at:

Denmark: www.ebst.dk/udbud

Finland: www.tekes.fi

Norway: www.forskningsradet.no

Sweden: www.formas.se

NICe: www.nordicinnovation.net

A) Common application form

The application must include and explain the research idea, relevance of the project for the construction sector, relevant knowledge in this area and research methods. There shall be a common project plan describing the responsibilities and budget of each partner. The proposal will be evaluated as one entity. Each partner will be funded by the national funding organisation involved in the call. The proposal should define activities, as well as the budgets, for each partner and the total budget. Proposals must be written in English and the budget must be submitted using € as currency.

The application form for the common application can be found at www.nordicinnovation.net

B) National application form (see further instructions in the section "National eligibility criterion")

Application must be submitted using the relevant national application form accompanied with the common application form, no separate national plan is required. Applicants applying for funding from NICe only have to submit the common application form.

The national application forms can be found at the national websites.

Project management

Each consortium must appoint one "Project Coordinator" who will be responsible for the communication with the funding organisations. The project partners are requested to sign a consortium agreement to agree on relevant issues dealing with the responsibilities within the project and the exploitation of results.

Length of projects

The project should normally be of 2-3 year duration. A project should not exceed 36 months.

Who can propose?

Proposals are invited from universities, research institutes and other public research organisations following national eligibility criteria. Private companies also have the opportunity to send their own proposal or take part in the consortium but it is advised to study the national funding conditions on this issue. Proposals should include partners from at least two countries however proposals applying for funding from Nordic Innovation Centre should include partners from at least three countries. A plan of work that distributes work evenly among all parties involved is also of great importance. Research will be funded from national sources.

Eligibility

Applications will be rejected without substantive consideration if the deadlines and the requirements listed in the call text are not met.

The eligibility of the proposals will be evaluated by the national funding organisations following national eligibility rules. Eligible proposals will then be evaluated in a joint evaluation panel.

Evaluation

A joint evaluation will take place in October 2008. Funding decisions will be made in December, based on the results of the evaluation.

The joint evaluation criteria can be found in Annex 1. Annex 1 is available at the www.nordicinnovation.net website and national websites

Funding

Funding will be awarded according to national rules. Additional co-financing from stakeholders is requested according to national practices.

National eligibility criterion

Danish participants

Danish participation in projects is funded by EBST - the Danish Enterprise and Construction Authority. Funding by EBST is restricted to public owned or public supported universities and research institutes. The project leader of the Danish part of the project must hold a Ph.D.-degree. Proposals with Danish participation must be accepted by The Danish Strategic Research Council. Private companies have the opportunity to take part in a consortium, but cannot receive Danish funding. Further information and the national application form is available at www.ebst.dk/udbud

Finnish participants

Tekes funds Finnish universities, research institutes and private companies. Funding is given within the following parameters:

- Research institutes and universities:
 - o Research grants can range from 50 percent to 100 percent of eligible costs. Projects are co-financed by and conducted in cooperation with companies.
 - o In university, polytechnic and research institute projects, Tekes funding requires collaboration between research organisations and companies or a significant social impact.
- Private companies:
 - o R&D grants run from 25 to 65 percent of the eligible costs.

- o R&D loans run from 25 to 70 percent of the eligible costs.
- o Differing funding measures can be combined in a single project. One project may, for example, receive a grant of 25 percent of the eligible costs, and in addition, a loan of 25 percent.
- Application forms are available on the internet www.tekes.fi in Finnish and Swedish. Applications may be signed electronically.

Norwegian Participants

Norges forskningsråd (The Research Council Norway) gives R&D grants to Research Institutions and privat companies:

For companies - User-driven innovation project (BIP):

R&D grant will by experience vary from 30 to 45 % of relevant project expenses covering payroll expenses, purchase of external R&D services and one or more grants /fellowships. One of the cooperating partners must be a R&D research institution, being responsible for most of the research work. In addition projects can be co-funded by a Skattefunn project, which is a tax incentive scheme for R&D activities in companies giving 18-20% tax reduction on invested R&D (www.skattefunn.no)

For R&D institutions - Knowledge-building project with user involvement (KMB):

R&D grant covers 80% of relevant project expenses, the remaining 20% to be in money from the participating industry companies or other users. The topics must be of high relevance and major growth potential in terms of future industrial development and value creation, for the participating users and society. The application must be in English.

General requirements:

To ensure equal evaluation, the project description must be completed according to requirements stated in the national call text. The grant proposal will be evaluated relative to the assessment criteria that apply to the specific type of application, and the requirements and principles set out in the call for proposals. Calls and application forms are found on the internet www.forskningsradet.no, in Norwegian and English.

Swedish participants

Funding in this call is restricted to Swedish universities and research institutes recognized by Formas. The project leader of the Swedish part of the project must hold a PhD degree.

The projects require co-financing with at least 50 % (20 % of the co-financing in ready money/cash) and inclusion of an implementation plan for the result of the project.

The Swedish parts of projects are included in the Formas-BIC or CERBOF programme, managed by BIC. The Swedish funding agencies Formas and Swedish Energy Agency collaborate in this call. Funding by Swedish Energy Agency goes through the research and innovation programme CERBOF, managed by BIC.

Results from research parts of projects with Swedish public funding are in the public domain.

The Swedish partner shall send the application (electronically) to Formas following the national rules at Formas website www.formas.se.

Nordic Innovation Centre

Nordic Innovation Centre funded projects should have significance for Nordic commercial development, boost innovation and competitiveness in the Nordic business sector, benefit the Nordic region and further sustainable development, be based on national priorities and initiatives and relate to other Nordic or international projects and activities.

Nordic Innovation Centre funds maximum 50 percent of project costs. The remaining funds can be covered either in the form of working hours or direct funding. All types of organisations (e.g. companies, universities, research institutes, etc.) can apply.

Projects must include partners from at least three Nordic countries, and the project coordinator must come from a Nordic country. For further information and application form, see

www.nordicinnovation.net

Enquiries

Enquiries should be addressed to the national contact points in the participating countries:

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