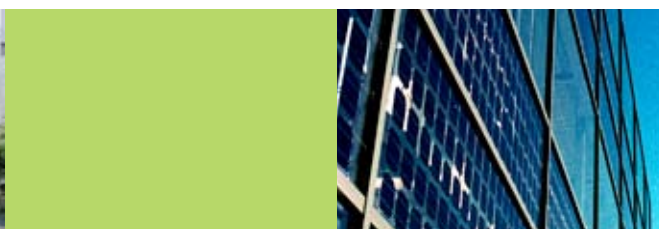


Gemini Centre for

# Sustainable Architecture and Property

Generating added value for the building industry and  
society-at-large through research and education

A joint effort between the Faculty of Architecture and Fine Art at NTNU and the  
Department of Architecture and Building Technology at SINTEF Building and Infrastructure



# Sustainable Architecture

**In compliance with national and international goals related to the environment and sustainability, the Gemini Centre for Sustainable Architecture and Property is intended to increase added value in the building industry and society-at-large through research and education. The Centre has designated three target areas for the period from 2006 to 2009: Energy and the Environment, Usability, and Property Development and Management.**

## Energy and the Environment

Energy consumption and environmental impact are closely related in terms of individual projects as well as in a global context. The building industry accounts for roughly half the nation's resource and energy consumption, and a considerable percentage of Norway's real capital is tied up in property. To reach national and international goals related to energy consumption, climate and environmental impacts, it is crucial to involve the building and property industry.

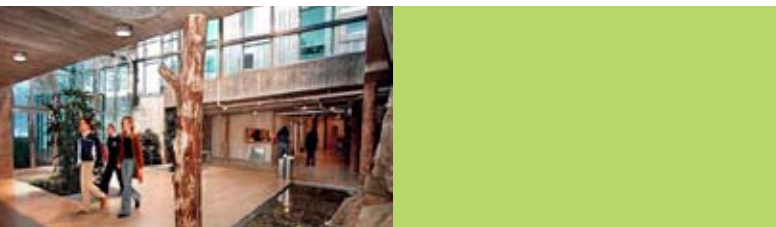
The Gemini Centre's interdisciplinary expertise on energy and the environment will be used to examine how energy use and environmental impact are associated with architecture, technical installations and technical building solutions throughout the lifetime of a building. Long experience and close cooperation with the building industry will allow us to develop good, relevant solutions for individual players and for society as a whole.

## Usability – Value in use

Usability encompasses quality, productivity, user satisfaction and adaptability. From the perspective of sustainability, this means safeguarding the value of real capital, ensuring good resource utilisation and ensuring that buildings provide an effective, good environment for individuals and businesses alike.

One of the questions being investigated by the Gemini Centre is how buildings' usability facilitates productivity, affects added value and can be used to support users' financial and professional goals. Another important perspective is to study how building, information and communications technology and organisation interact to support business goals.

Usability is just as important in homes as in commercial properties. The research community at the Gemini Centre has long research traditions in both fields, and will present its results to the industry as a whole as well as



# Architecture and Property

## Property Development and Management

The sustainable development and management of property generate formidable dividends for developers, users and society as a whole. The Gemini Centre for Sustainable Architecture and Property will focus on the changes that take place from the perspective of buildings, properties, urban development and infrastructure in a life-cycle perspective.

The Gemini Centre is home to a group of research-based education and knowledge specialists who are able to deal with and resolve problems and challenges of strategic importance for homeowners, property managers and users. Relevant issues include:

- the professionalisation of the role of the builder/owner
- the development and management of buildings in a life-cycle perspective
- the development of new service areas for users

NTNU has established a Centre for Property Development and Management. The Centre is the hub of a network for teaching, research and practice in property development and management in Norway. The Centre also cooperates closely with Norwegian trade organisations, enterprises and government organisations, agencies and ministries. At the international level, the Centre enjoys close cooperation with a number of universities, research groups and trade organisations.





## The Gemini Centres

The first Gemini Centres were established in 2003, marking the advent of a new and closer type of cooperation between NTNU and SINTEF. The two institutions have established a number of Gemini Centres where the collaborating research communities have set up mutual strategic processes and coordinate their work on applications for larger R&D projects and programmes. The research communities are thus better able to contribute to innovation and economic development. The Gemini Centres' vision 'to form internationally outstanding partnerships'.

## SINTEF Building and Infrastructure

SINTEF Building and Infrastructure was established on 1 January 2006 and consists of departments from the former Norwegian Building Research Institute, and departments at SINTEF Technology and Society, as well as one group from SINTEF Energy Research. SINTEF NBL AS is a wholly-owned subsidiary of SINTEF Building and Infrastructure AS and, together, the two companies have formed SINTEF's seventh research division. The Norwegian Building Research Institute was established in 1953 and has been Norway's leading R&D community for the building and housing sector. The SINTEF Group has 2 000 employees and is Scandinavia's largest research institute.

## Norwegian University of Science and Technology (NTNU)

NTNU was established on 1 January 1996 in furtherance of the University of Trondheim (UNiT). UNiT was established in 1968 through a merger of the Norwegian Institute of Technology (NTH), the Museum of Natural History and Archaeology (VM) and the Norwegian Teachers College (NLHT) (subsequently the College of Arts and Sciences (AVH)). The Faculty of Medicine, the Trondheim Conservatory of Music and the Trondheim Academy of Fine Art were also incorporated into NTNU. NTNU currently offers instruction in more than 2 000 subjects and topics, and has 20 000 students and 3 500 employees.

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