Tectonic Thinking

A Critical Strategy for a Responsive and Adaptive Architecture

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The Furniture College Letterfrack
O'Donnell + Tuomey Architcets
Photo: CINARK

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TECTONIC THINKING

- A Critical Strategy for a Responsive and Adaptive Architecture

ENHSA-EAAE **Rethinking the Human in Technology-Driven Architecture**
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Questions:

Can a tectonic building practice be strengthened through new creation processes, where resources are used more purposefully, deliberately and systematically?

Which new measures are necessary if we are to develop a strong tectonic building practice with due consideration for increasing climate and environmental problems?

Objective

The project is to analyse and develop the tectonic practice based on case studies, in relation to:

- Cultural anchoring and identity creation
- Building culture and creative processes
- Sustainability, lifecycle and resource management

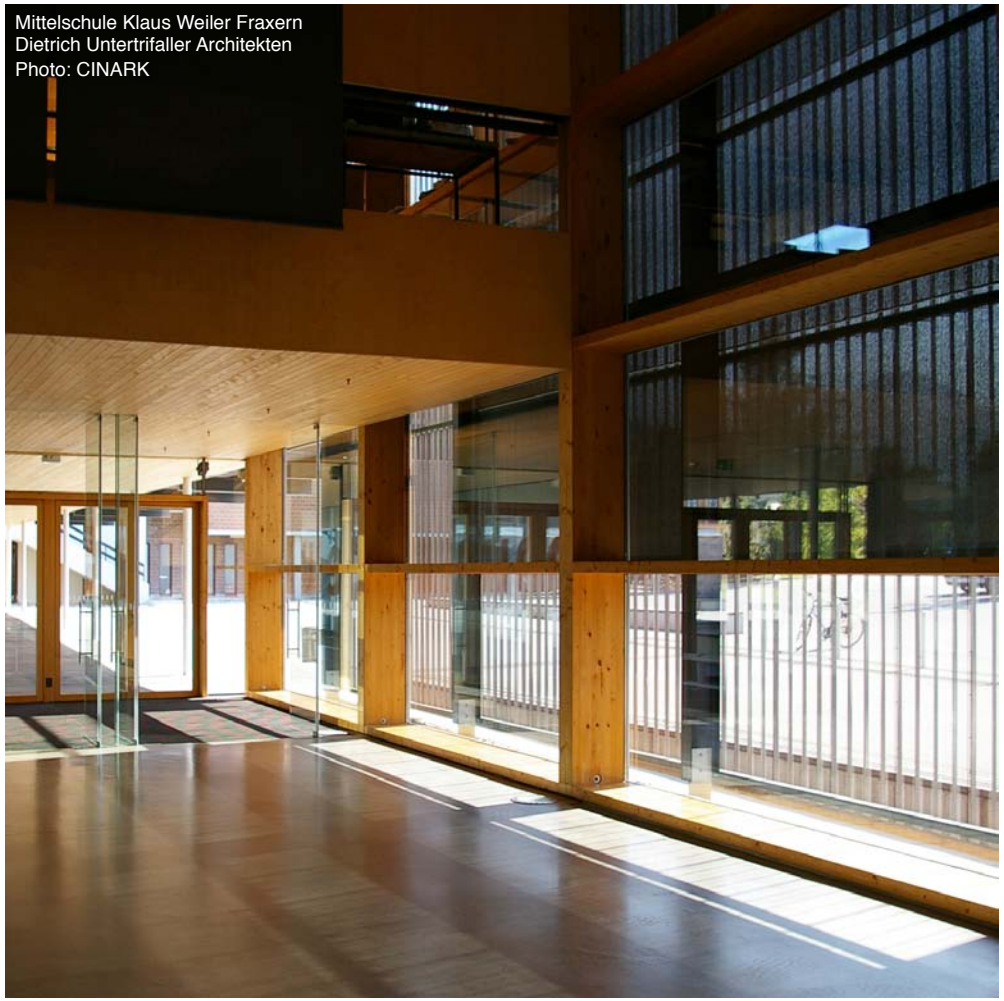
Mittelschule Klaus Weiler Fraxern
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Photo: CINARK

Towards a Tectonic Sustainable Building Practice

Housingproject Mulhouse
LacatonVasal
Photo: CINARK

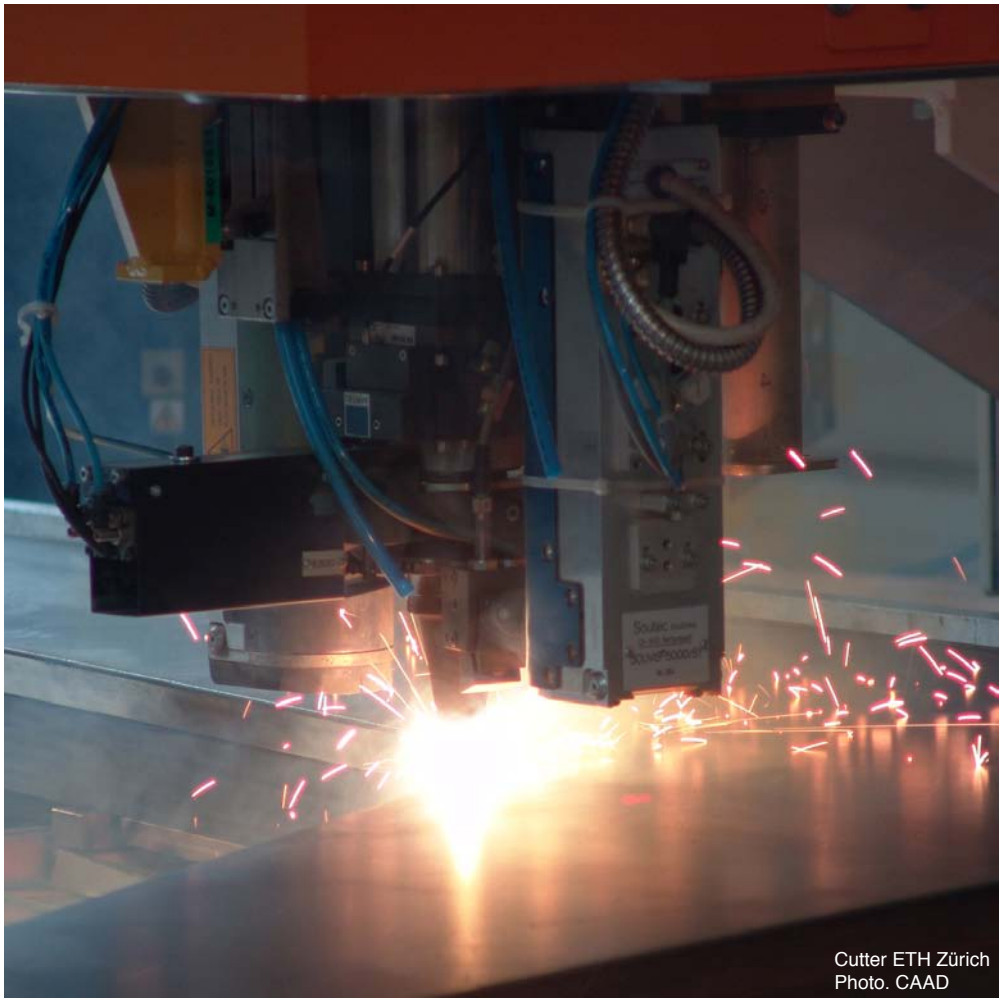
How can tectonic thinking form the basis for critical strategies for improving contemporary building practices and industry to sustain a responsive and adaptive architecture that involves a more sensitive involvement of the human values?

Tectonic Thinking – Research Question

'Tectonic thinking – defined as a central attention towards the nature, the making, and the application of building materials (construction) and how this attention forms a creative force in building constructions, structural features and architectural design (construing) – can be used to identify and refine strategies for improving contemporary building industry.


Loblolly House
KieranTimberlake
Photo: CINARK

Tectonic Thinking - Hypothesis



Cutter ETH Zürich
Photo. CAAD

Contemporary building industry has radically developed in terms of advanced industrialized manufacturing. In particular, digital technologies have provided new and different ways of fabrication through the past couple of decades. These make long series of identical objects unnecessary, industrially manufactured components can now be customized to fit a particular construction design

Tectonic Thinking – State of the Art

Some of the features of contemporary industrialized manufacturing are also comparable to some of the characteristics in tectonic thinking such as the attention to:

- **The use of resources (material)**
- **The methods of processing (fabrication)**
- **The definition of systems (context)**

Housingproject Kvistgaard
Tegnestuen Vandkunsten
Photo: Vandkunsten

Tectonic Thinking – The Making of Architecture

Cellophane House
KieranTimberlake
Photo: CINARK

The interplay of *construction and construing* can be specified as:

- **at product level of building components focusing on *assembly* of various elements**
- **at system level focusing on *integration* of various systems**
- **at the level of all-encompassing systems focusing on *conceptualizing* of various building constructions/designs**

Tectonic Thinking – A Model of Analysis

www.tektonik.dk