

## DESIGN PROCESS AND SYSTEMATIC THINKING POOK Arkkitehtitoimisto Oy / Architects Ltd BRIEF

We believe in structural rationality, innovation and functional clarity. Our aim is durable architecture that exceeds the set goals.

**innovation to challenge the obvious - courage to create new - sensitivity to select well**

### ANALYSIS

We constantly develop our methods of systematic task and design analysis. We believe in systematic and pragmatic approach in task understanding, design development and evaluation. The best architectural goal is not achieved only by seeking orthodox answers to the analyzed design questions. The process requires innovation to challenge the obvious, courage to create new and sensitivity to select well. For us design consists of hard and soft values:

**Hard values:** The hard values can be systematically evaluated and developed by means of analysis tools and improving knowledge. These values include measurable factors such as functional efficiency issues, building and maintenance economics, ecological loads, structural solutions, durability.

**Soft values:** Soft design values are subjective components of architectural beauty, environmental and cultural relationship, effect on people's functional free will, iconic meaning and message of the design today and in the future.

Design statement

**FLOW OF FORCES** Environmental - seemingly constant- factors from sun to gravity gain a response from the flows of structural forces. These flows are designed to meet the altering demands of functions but to remain visible and understandable in the entity. The aim is to create structurally defined, durable and clear design. Design in Nordic countries is specially characterized by the periodical extremes of summer-autumn-winter-spring; solar angles and light hours vs. energy consumption and availability. These factors are answered by both static and dynamic design solutions.

**FUNCTIONAL VARIANT** Functions evolve in time, a building will evolve accordingly. Functional variants are the changing requirements that a design will fulfill during its lifetime. Variants operate in the design both during and after the process. True success is evaluated over time within the full life cycle. In sustainable design functional variant plays important role in defining how the design is used over the life span and on what environmental impact.

**MATERIAL SIGNALS** Materials are close to our senses, giving us perpetual impulses. The use of material should respect its properties, possibly contrast its surroundings, but remain in elaborate equilibrium to the whole. The sustainability of materials is a measurable value that is seriously taken into account in design process.

**CUSTOMER INTERACTION** We use a combination of drafting, scale models and 3D-BIM to shape the design, each part giving complementing values. Computing is used as a tool for real-time customer interaction and design evaluation. The task understanding is interactive; complementing design gives better possibilities for bidirectional task definition.

## SUSTAINABILITY AND DESIGN

By design we organize material and energy.  
 In our thinking this is divided into three associated groups.

<i>Genome</i> - Immediate	<i>Life</i> - Sequence	<i>Heritage</i> - Spiritual
<ul style="list-style-type: none"> <li>• Term: Impact of the design and building process; building materials, transport, production, energy, demolishing. What is the immediate ecological price?</li> <li>• Determined by hard design values.</li> <li>• Immediate numeric evaluation is possible</li> </ul>	<ul style="list-style-type: none"> <li>• Term: Use of materials and building-heating-lighting-transport energy during the full lifecycle of the design. How effective is the design both technically and functionally?</li> <li>• Determined by both hard and soft design values</li> <li>• Evaluation is numeric but subject to long term periodical changes</li> </ul>	<ul style="list-style-type: none"> <li>• Term: lifecycle and beyond, impact on human choices. What activities does the design provoke and enable? What will be the effect of those? Will the design encourage to a positive change, and in what amplitude?</li> <li>• Mostly determined by soft design values</li> <li>• Evaluation is a prediction. True evaluation is done over time</li> </ul>

These groups together form the environmental effect of the design. The groups together and individually are to be evaluated and systematically developed during the design process.

