



WT - Sustainable Sites

The IDP integrate knowledge from engineering and architecture and let them interact with each other in order to solve the often very complicated problems connected to the design of sustainable buildings. IDP does not ensure aesthetic or sustainable solutions, but it enables the designer to control the many parameters that must be considered and integrated in the project when creating more holistic sustainable architecture in order to achieve better sustainable solutions, because all the different parameters are considered during the process.

Parameters of IDP (Integrated Design Process):

Analysis phase:

- Site analysis (history, architecture, genius loci, green structures, infrastructure, functions in the area, age of inhabitants etc.)
- Comfort analysis (based on CR 1752)
- Climate analysis (Solar calculations, temperatures, rainfall, humidity, Wind roses, etc.)
- Analysis of the legislative demands (Building codes and municipality documents)

Sketching phase:

- Site plan
- Solar studies of site plan by computer (Bsim2002), to investigate shadows from buildings.
- Green roofs
- Green corridors
- Consideration of daylight levels in the middle buildings and the risk of glare.
- Optimization of U-values (Insulation thickness)
- Calculation of the heating and cooling load
- Ventilation strategies (Natural ventilation, Placement of windows)
- Atriums in relation to entrance area in the dwellings
- Open floor plans
- Construction system (stability)
- Physical models
- Virtual model

Synthesis phase:

- Ventilation strategies (Natural ventilation, Placement of windows)
- Calculation of the heating and cooling load
- Choice of internal materials based on room acoustic calculations in the office area
- Choice of materials based on LCA profiles
- Calculation of a structural detail (The four storey corbel towards the fjord)
- Calculation of minimal ventilation rate and the opening area of the windows to ensure this.
- Physical models