

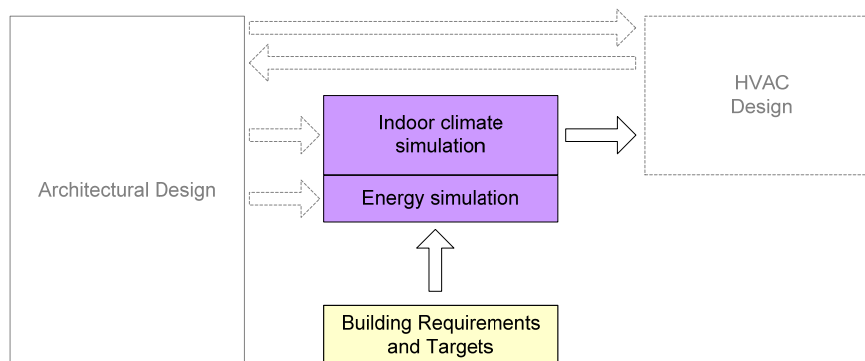
Generic AEC/FM View Description

Space requirements and targets > Thermal simulation

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Description

Building requirements and targets can be used in thermal simulations as an input or for validation of the simulated solutions. Requirements and targets are needed both for indoor climate and energy consumption simulations.



Requirements and targets can be set for several different levels; component, space, system and/or building level. This document defines the data exchange for space related requirements and targets from requirement model to thermal simulation application.

Indoor conditions of spaces

The following indoor conditions target values are exchanged for each space type:

1. Outdoor air requirement [L/sm^2 or l/s person]
2. Air temperature [$^{\circ}C$]
3. Operative temperature [$^{\circ}C$]
4. Duration of air and operative temperatures [%]
5. CO_2 level [ppm]
6. Relative humidity [%]
7. Local air speed in occupancy zone [m/s]
8. Light level [lux]
9. Sound level of building service systems [dB]

Internal loads of spaces

The internal loads are occupancies, equipments and lights. The following data is exchanged for each load type:

1. Nominal load power [W/m^2]. From occupancy it could be also persons/ m^2 and activity of persons activity [W or met]
2. Schedule when internal loads are ON, fully or partial loads
3. Energy factor(s) of internal loads, [-]

The same data can be used in all stages of the projects. This view only defines the information that is exchanged. How this information is used often has to be agreed upon on a national or even level.

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