



***Alter-clim*: a decision tool for passive and hybrid thermal control strategies**

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Architecture et climat

Passive cooling

More and more examples



To help Brussels designer:

- technical requirements
- feasibility criteria
- design guidelines

Method

Website

- free acces and user friendly
- 250000 Trnsys simulations data base

Parameters

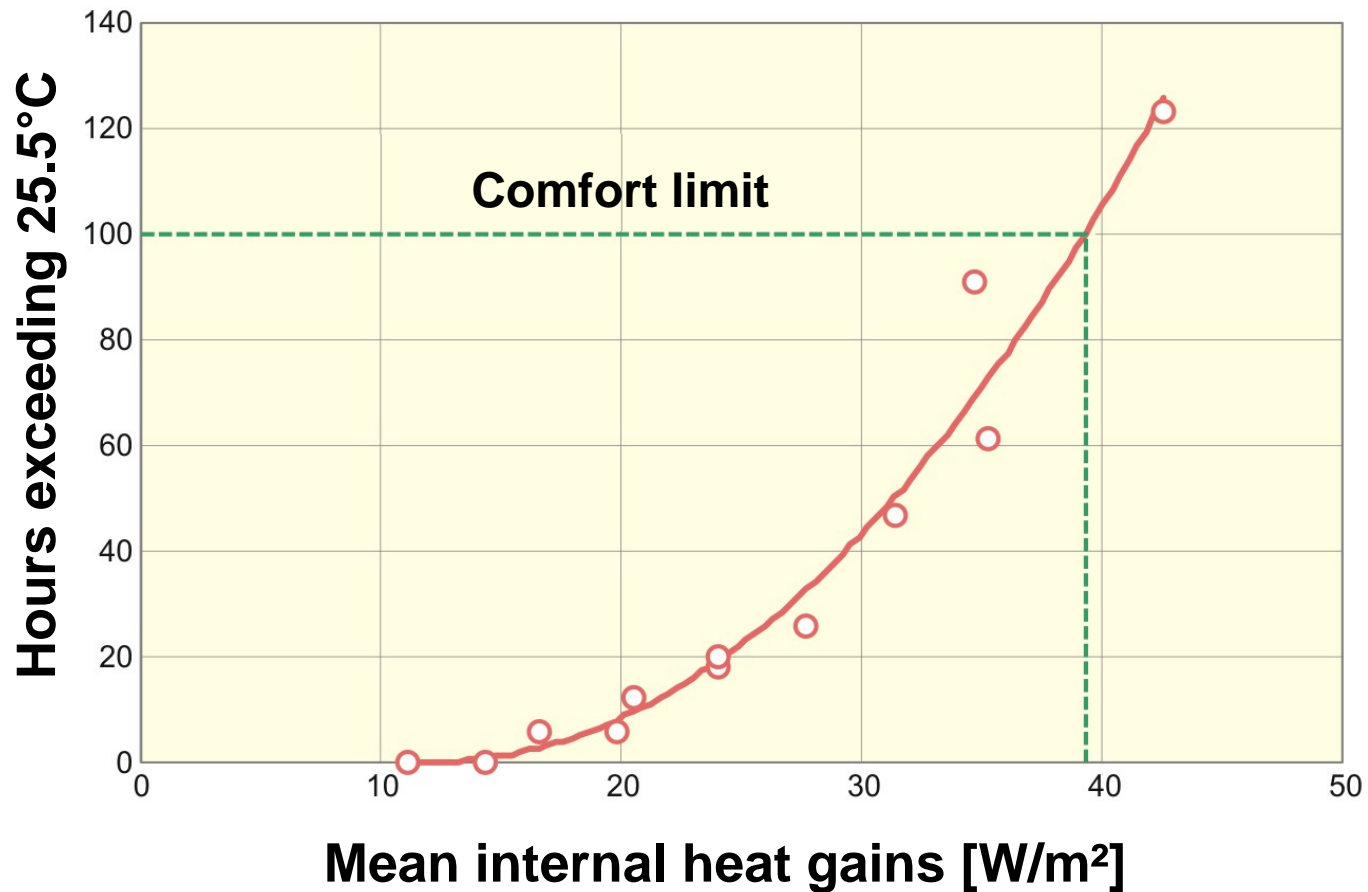
orientation
glazing surface
shading device
thermal mas
lighting management
internal gains
IAQ air flow rate

Systems

day natural ventilation
night natural vent.
permanent nat. vent.
mechanical ventilation
slab cooling

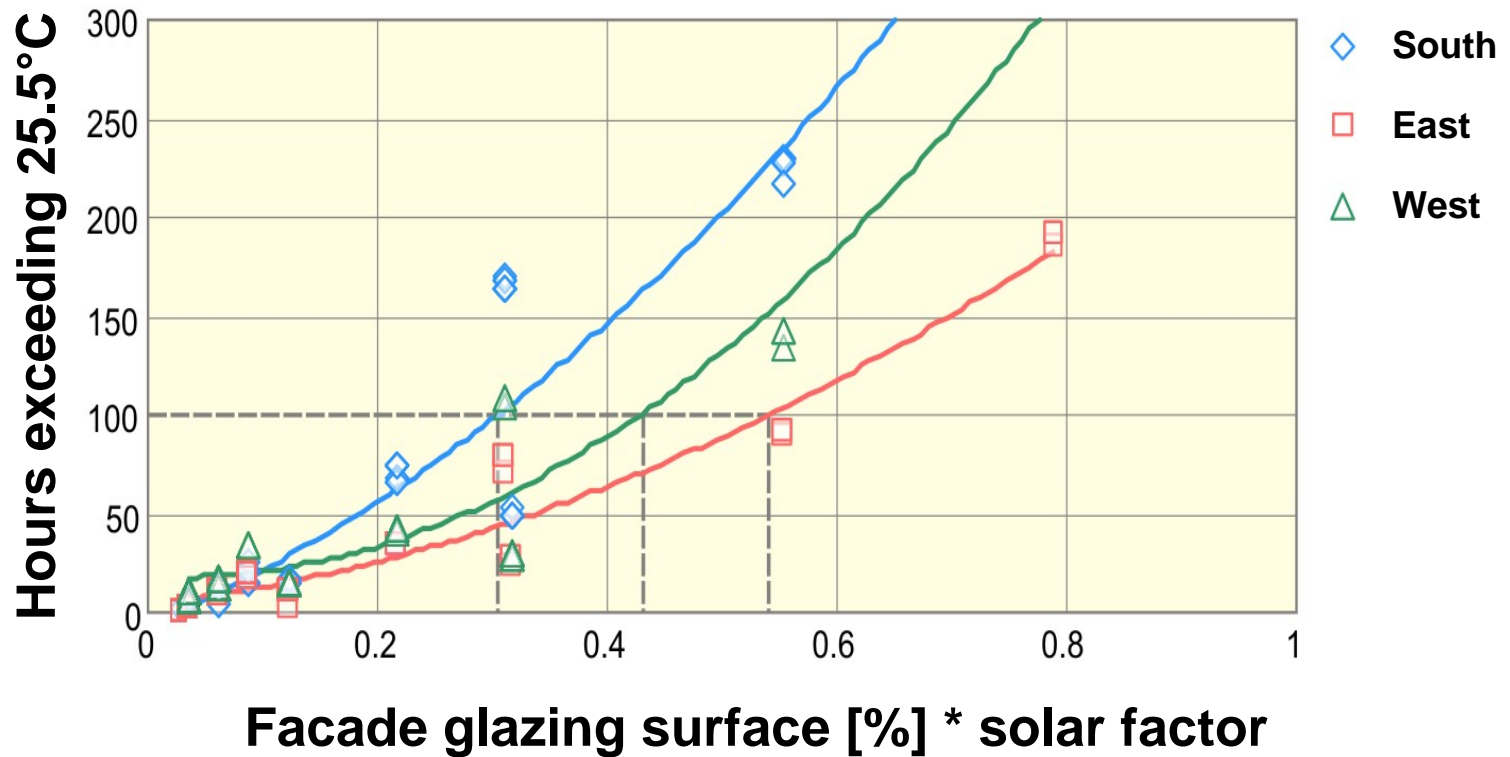
Some results

Passive ways to ensure comfort



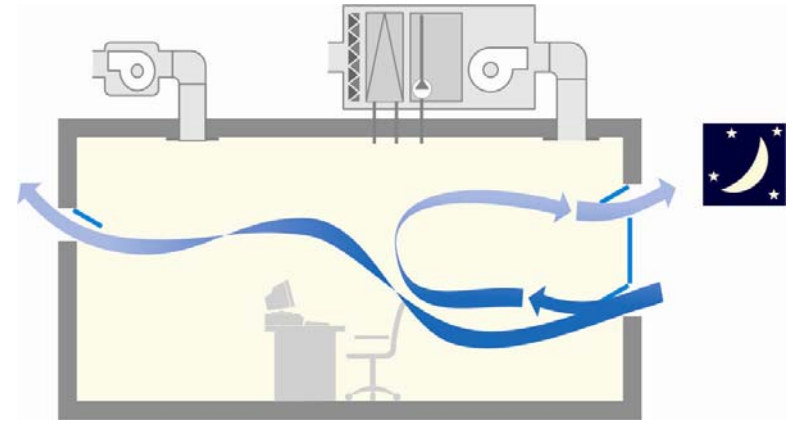
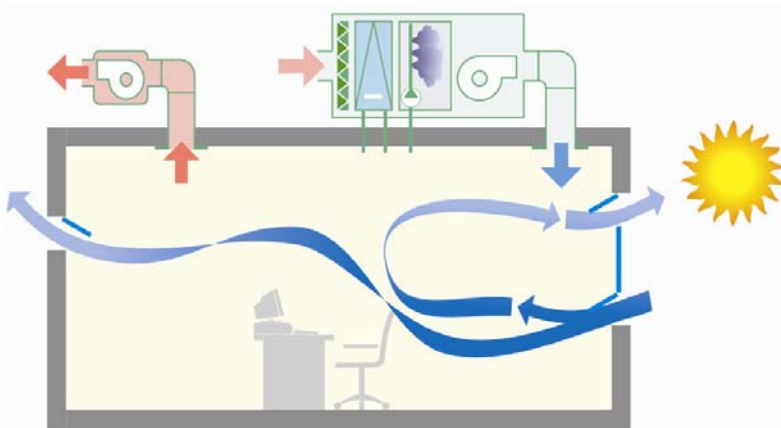
Some results

Passive ways to ensure comfort



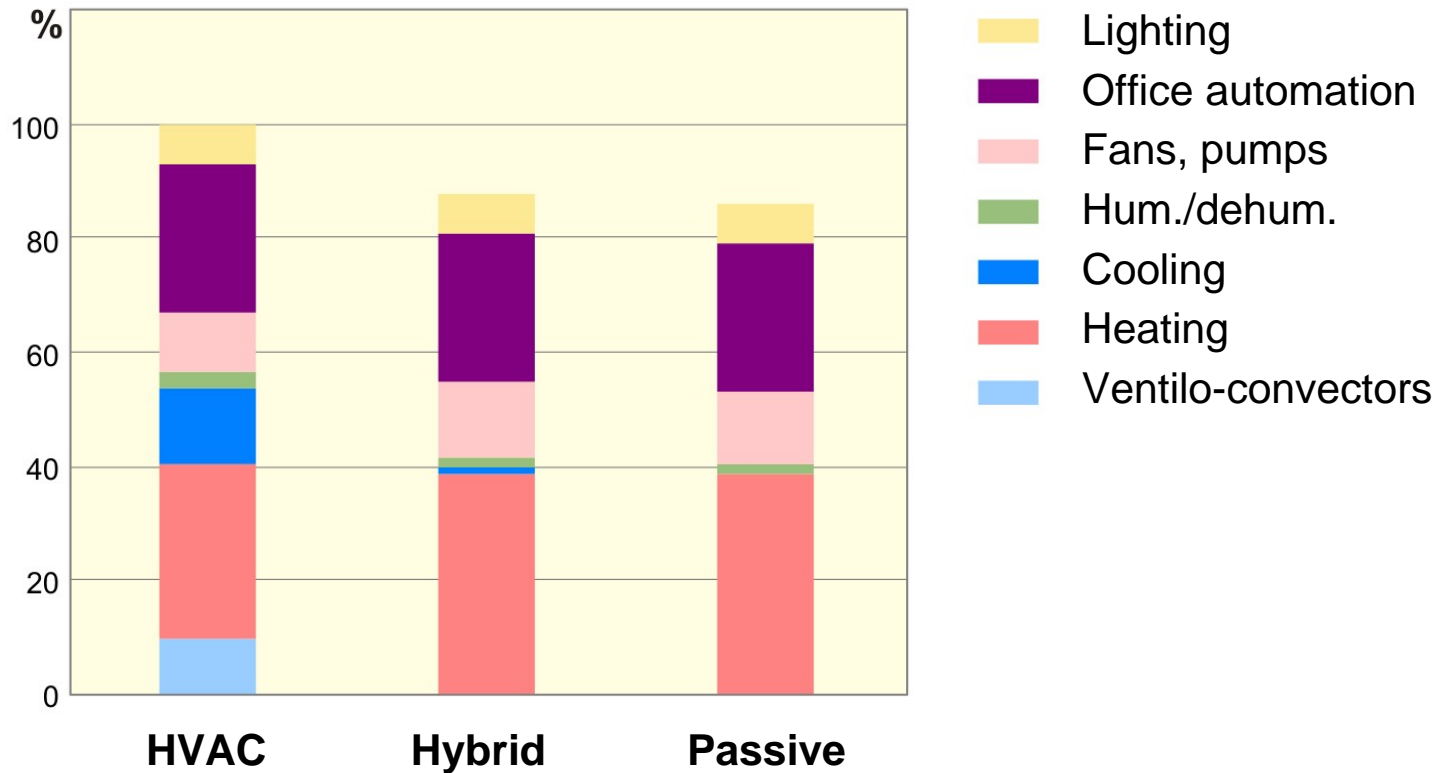
Some results

Hybrid ways to ensure comfort



Some results

Hybrid ways to ensure comfort



Conclusions

Passive cooling is feasible...

... and allows large energy savings

... but architectural impact is large.

Hybrid cooling is a more pragmatical approach.