



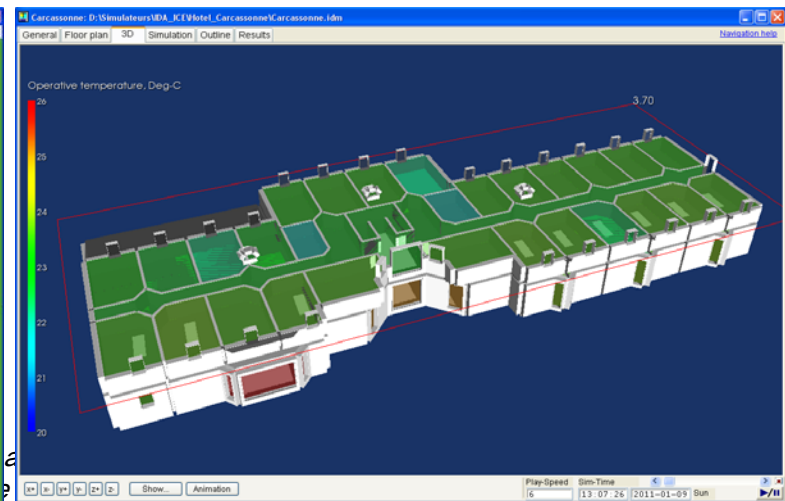
HABITAT OPTIMISÉ, MAÎTRISE DE L'ÉNERGIE & SERVICES

Simulation of HOMES solutions

Following experimentations on 5 pilot sites

Simulation

- Objective : evaluate potential energy savings provided by HOMES energy efficiency solutions.
- How?
- To set the simulation closer to the actual sites:
 - Use of audit reports
 - Uses of available measures (from the instrumentation)



2 simulations per site

- The real-life operation (including manual behaviour) before HOMES
- The automatic operation by applying the control strategy HOMES

The tested control strategy

The control strategy defined by the HOMES programme

➤ Tested on 5 pilot sites

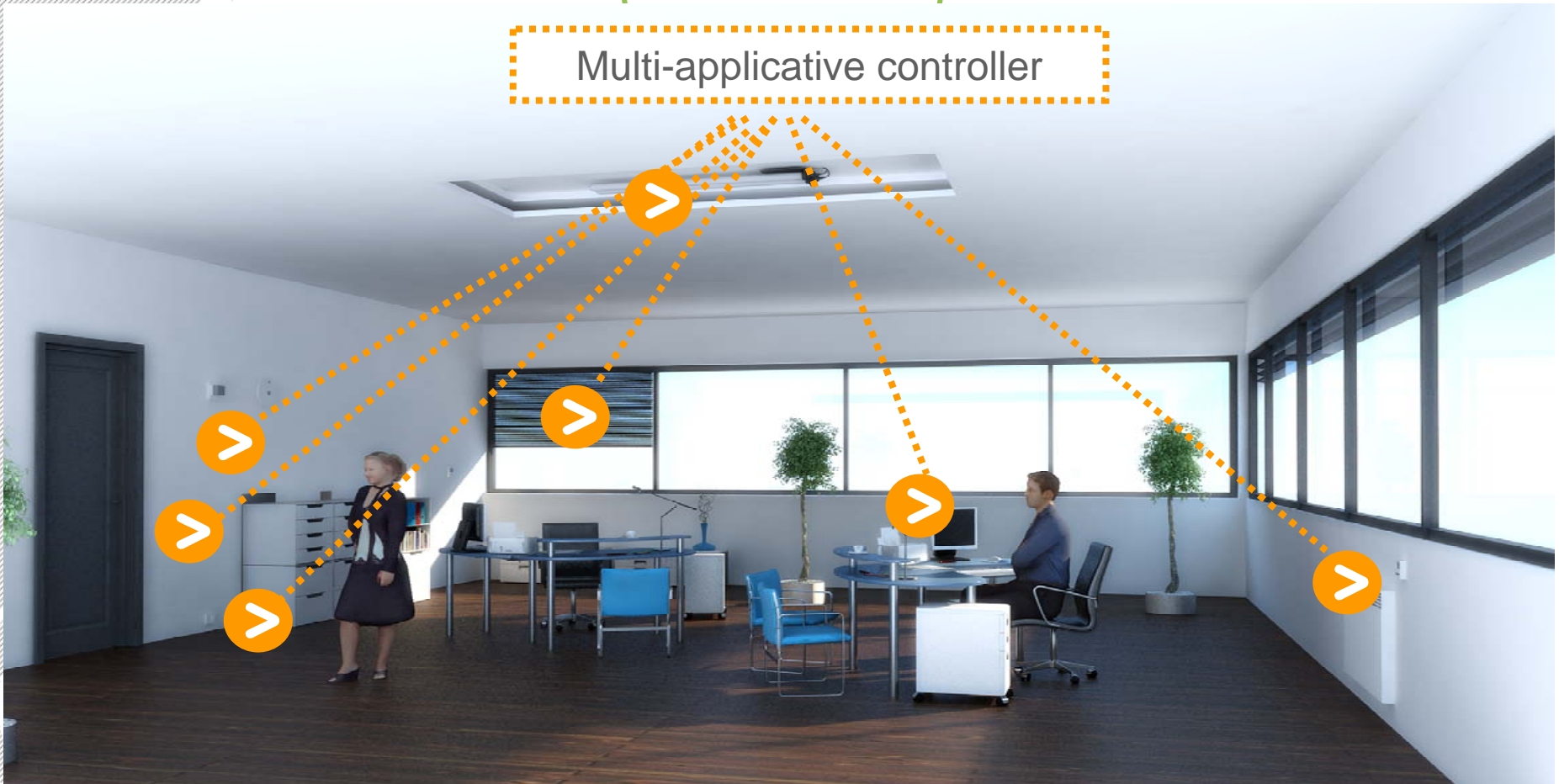
- 1. Reduce energy demand in each zone according to the occupancy,**
 1. In optimising comfort
 2. Thanks to multi-applicative control
 3. In Optimising free input use (example: free cooling)

- 2. Optimise energy supply** (production / distribution)

HOMES control strategy at a zone level



Multi-applicative controller



"HOMES" Consortium in accordance with the agreements that are binding these members.

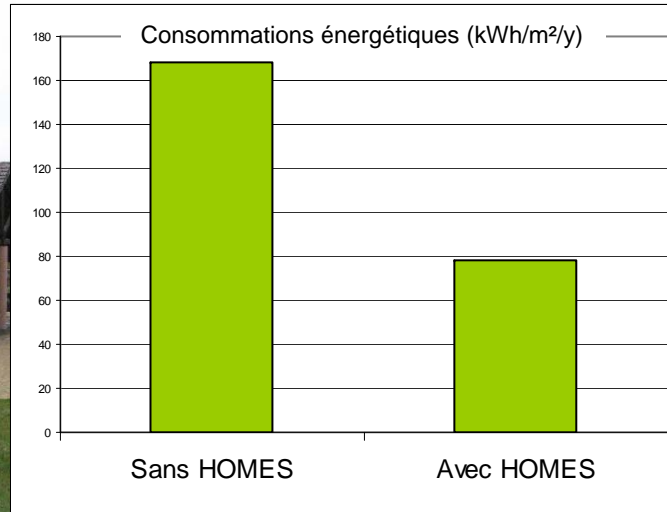


Control of equipment in a zone

Occupancy sensor

Comfort sensor : CO₂,
luminosity, temperature

Montbonnot primary school



56%

Energy consumption saved thanks to active control solutions



Pilot site managed by Schneider Electric

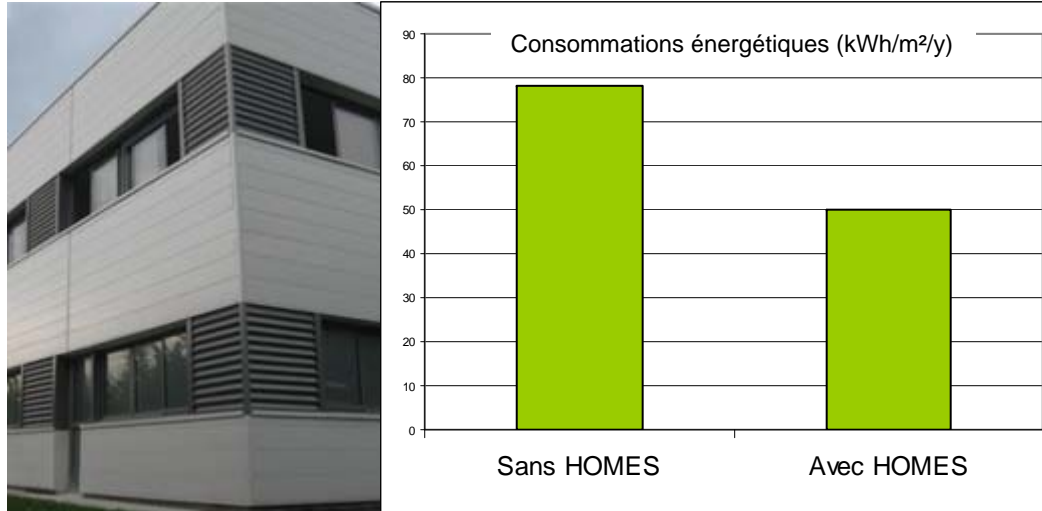
Cooperator: Realiss

What's the main energy saving source?

mainly by controlling the air quality and the thermal comfort (according to the occupancy level - which is very intermittent),

by controlling the heat production according to the requirements of the classrooms

Savoie Technolac office building



36%

Energy consumption saved thanks to active control solutions



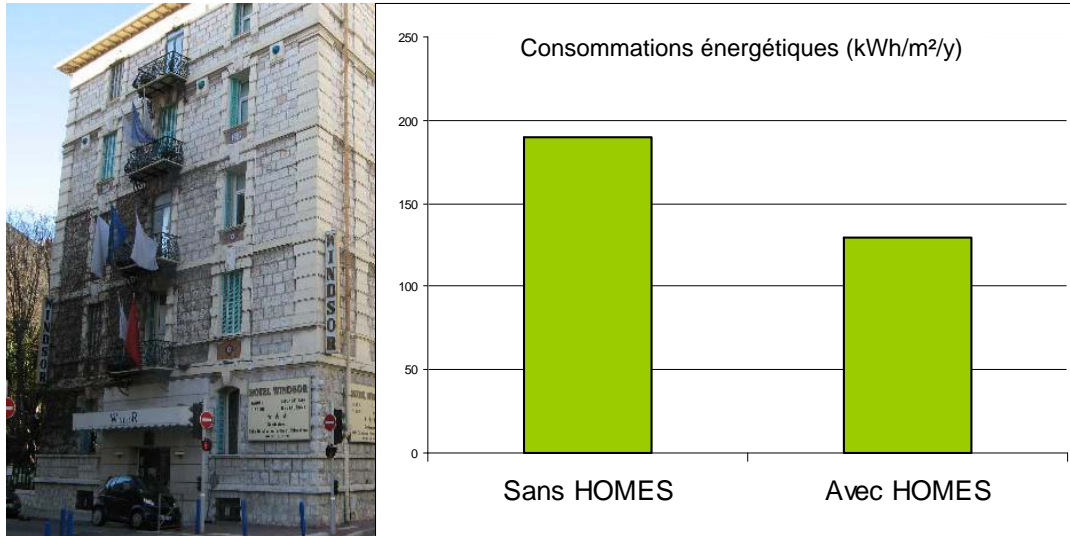
Pilot site managed by CEA

Cooperator: Perrin Electric

What's the main energy saving source?

by multi-application control operating mainly on controlling the automatic switching off of lighting office equipment when staff leave, and making optimum use of natural light

3-star hotel in Nice



37%

Energy consumption saved thanks to active control solutions



Pilot site managed by Watteco

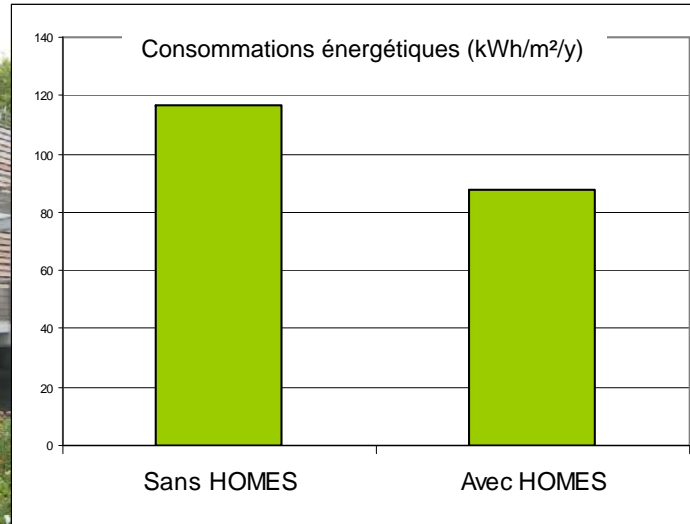
Cooperator: Le Confort
Electrique

What's the main energy saving source?

by multi-application control operating mainly on controlling thermal comfort

air quality using data provided by CO2 sensors

Collective residential building at Vaux-sur-Seine



22%

Energy consumption saved thanks to active control solutions



Pilot site managed by CSTB

Cooperator: Electen

What's the main energy saving source?

as a result of optimized management of heating according to occupancy level, of ventilation using data provided by CO₂ sensors, and of lighting according to user requirements (this parameter is linked to the opening/closing of roller blinds in order to benefit from free natural light)

1-star hotel in Carcassonne



30%

Energy consumption saved thanks to active control solutions



Pilot site managed by EDF

Cooperator: Christophe Chiffre SARL

What's the main energy saving source?

mainly by setting to energy idle mode when the rooms are not occupied, and also due to optimized control of external lighting, in particular of signs, according to meteorological data provided by the weather station installed on the hotel's roof.