



HABITAT OPTIMISÉ, MAÎTRISE DE L'ÉNERGIE & SERVICES

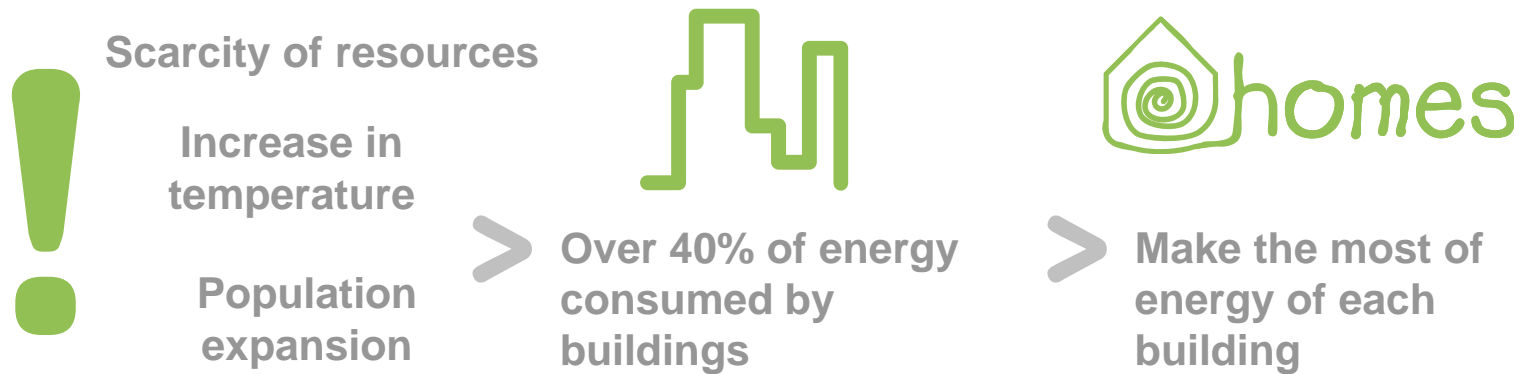
What is Homes

Energy efficiency & comfort



Eric Lebègue – CSTB
ICT for sustainable homes, Nice, November 2009

Buildings: energetic progress vector...



Our ambition: equip each building with solutions to achieve the best energy performance



A cooperation to serve this ambition



→ A consortium of 15 industrial and research partners

- Leaders of their markets (lighting, air-conditioning, building closures, electricity production and distribution, technical building management)
- innovative technological actors
- prescribers, standard specialists.

→ Headed by Schneider Electric

→ A 4 years program (2008 - 2012), of 88 millions €.

→ Funded by **OSEO** for 39 millions €.

The idea: create new control architectures for buildings' optimized energy management

- Optimised use of equipment and energy
- Measurement, monitoring and continuous improvement of the performance level
- Cooperation between players



Homes solutions

1 Comfort Sensor
 Multi-physics sensor
 No wire / No Battery
 Easy to install, use

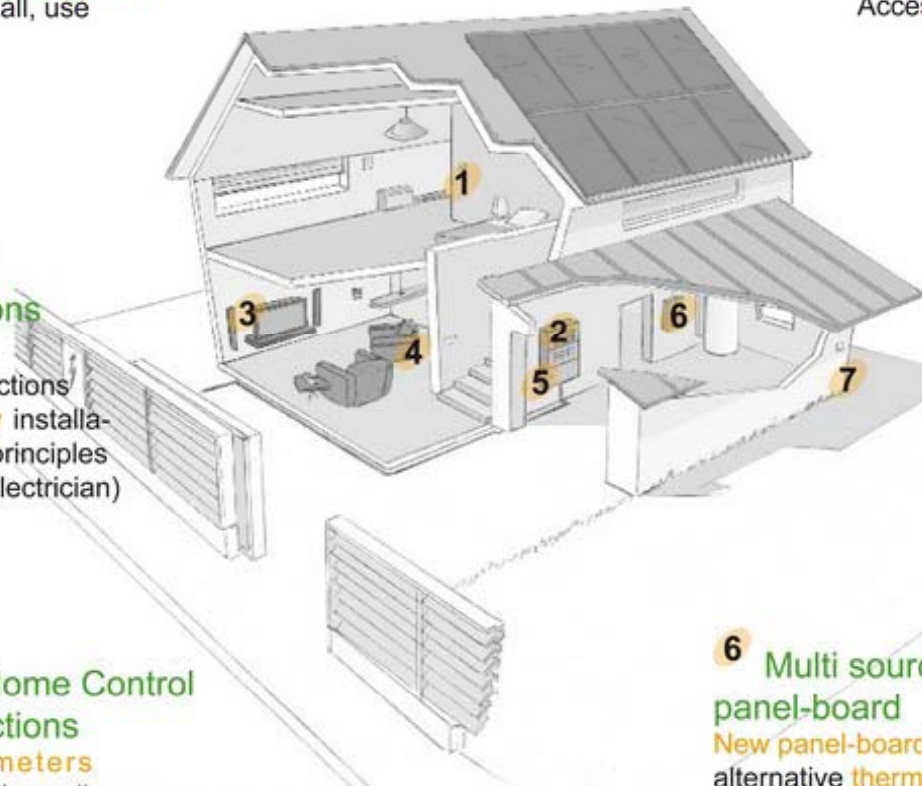
2 Optimiseur multi-applications d'ambiance
 New comfort functions
 Extremely easy installation and ramp up principles (possible for any electrician)

3 Home Control Functions
 New meters
 Home's appliances openness (multi-media, ...)

4 Services
 Connection point
 New providers relationship
 Access to new services

5 Multi source electrical panel-board
 New panel-board making alternative Energy sources interconnection and operation a commodity

6 Multi source thermal panel-board
 New panel-board making alternative thermal sources control a commodity



Residential houses for tomorrow





Measurement, monitoring and continuous improvement of the performance level

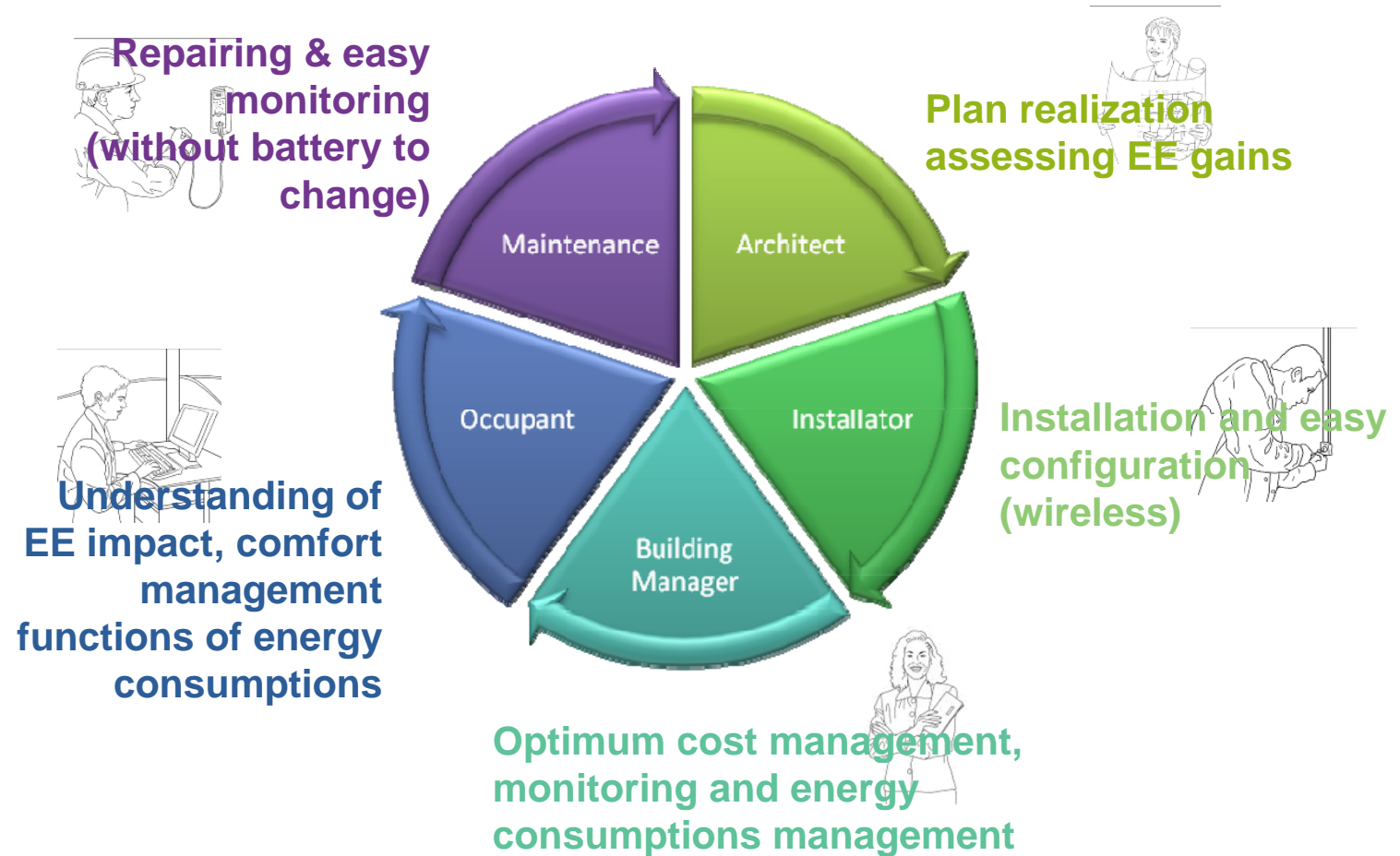
→ Actual performance is not what we imagine!

Up to 25% difference between the calculated energy performance level and that observed in practice

Each building have its own performance improvement programme

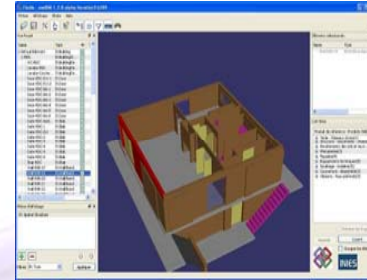
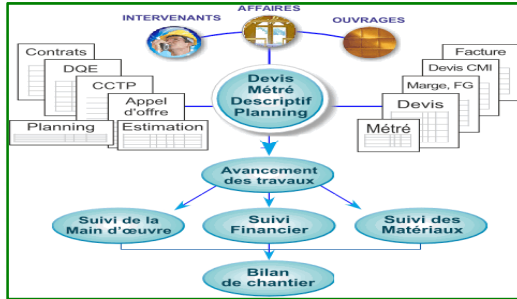
Homes provides the means to measure, monitor, diagnose, collect and organize information, and to make simple indicators available that incite people to take appropriate action.

Cooperation between players

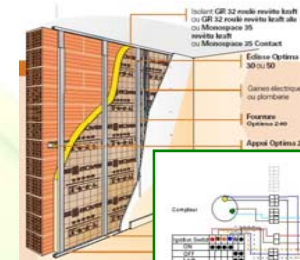


Tools collaboration around standardized (IFC) Building Information Model (BIM)

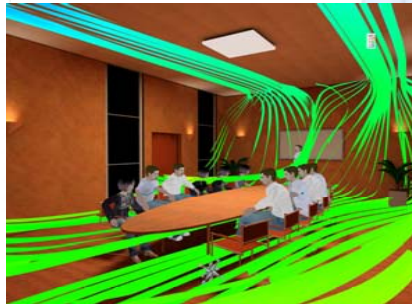
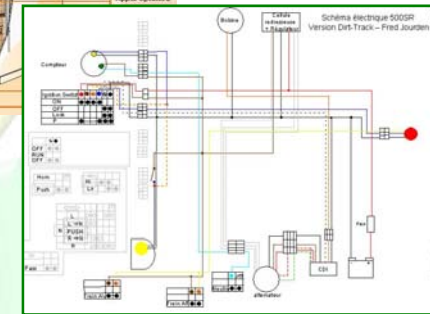
PLM and facility management systems



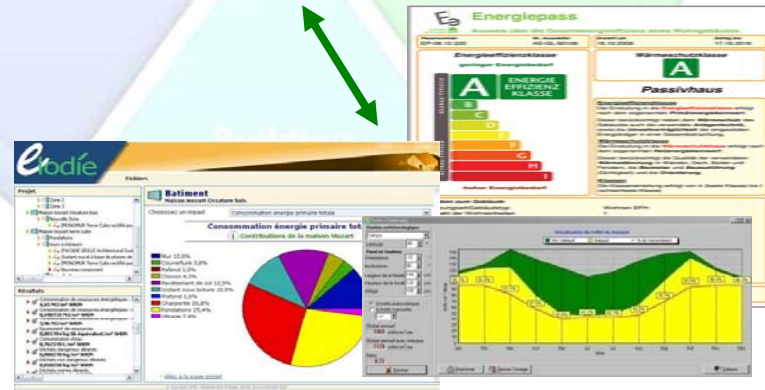
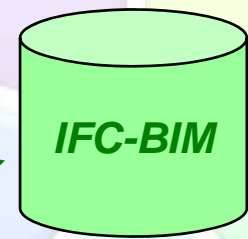
CAD and viewers



Construction and equipment systems

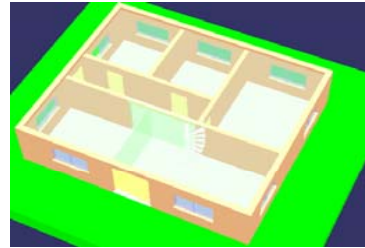


Occupant behaviors & Virtual reality

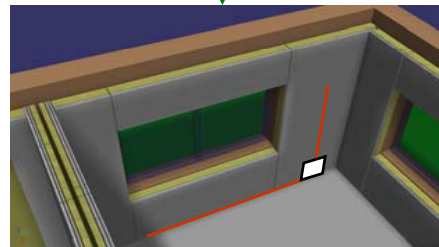
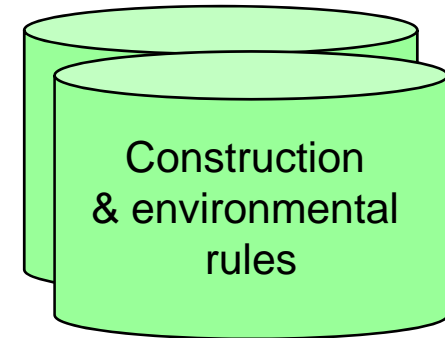
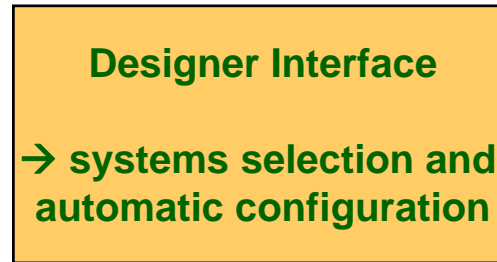
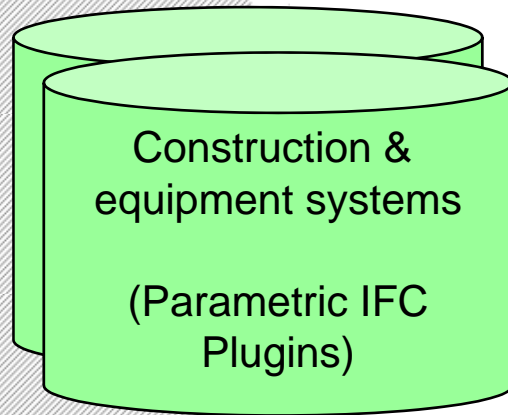


Energy vs. environmental impact analysis

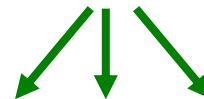
The new design process



Architect sketch



Detailed BIM



Detailed energy, environmental impact analysis & costs analysis, installation, building and facility management...



Thank you for your attention

→ For more information,

visit: <http://www.homesprogramme.com>