

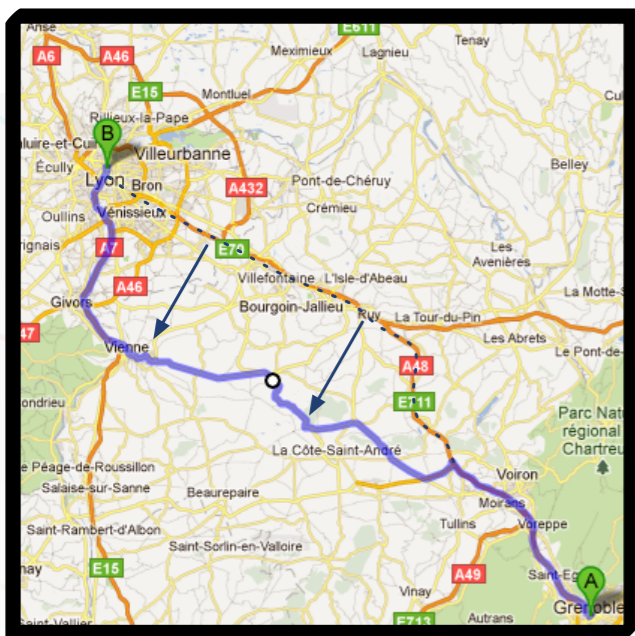
projet ReactivHome: Services en Réseau pour l'efficacité énergétique Active dans l'Habitat



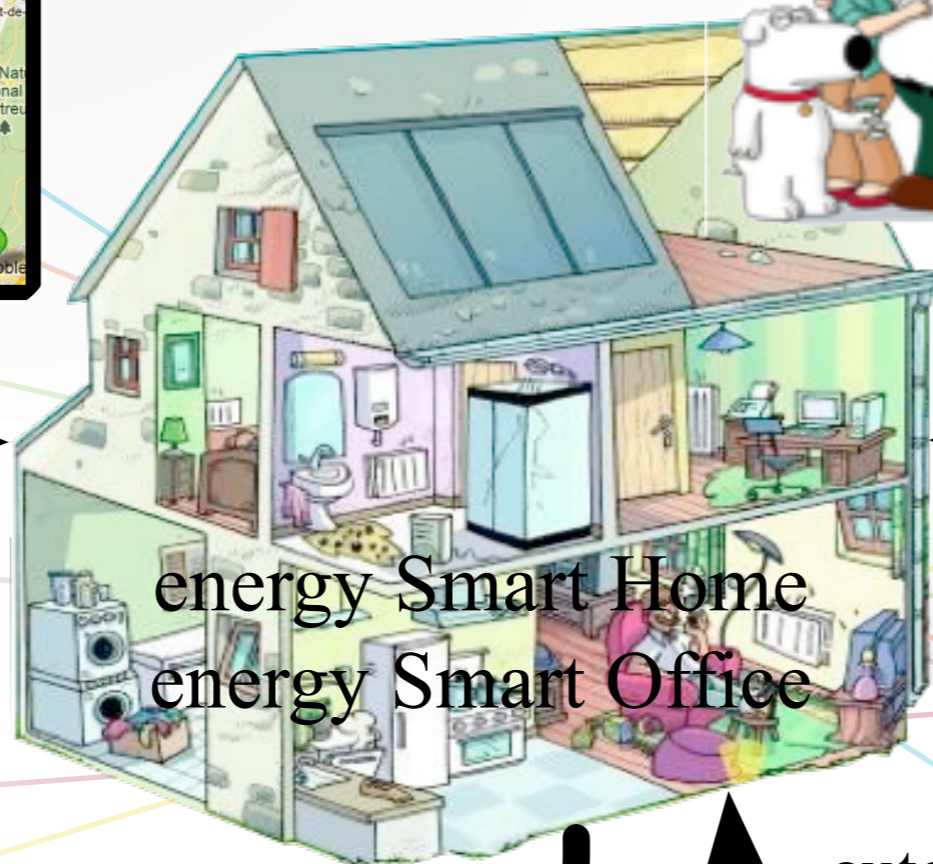
stephane.ploix@grenoble-inp.fr



contexte/objectif



description
(model) of
the dwelling

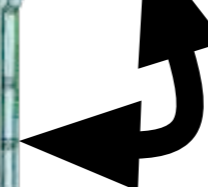


energy Smart Home
energy Smart Office

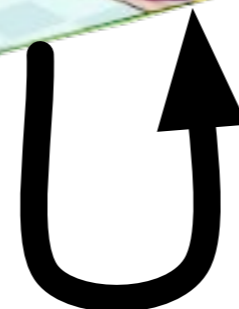


interactions :

- what if ...?
- manage sub-systems
- propose and adjust plans
- what is happening?
- what happened?



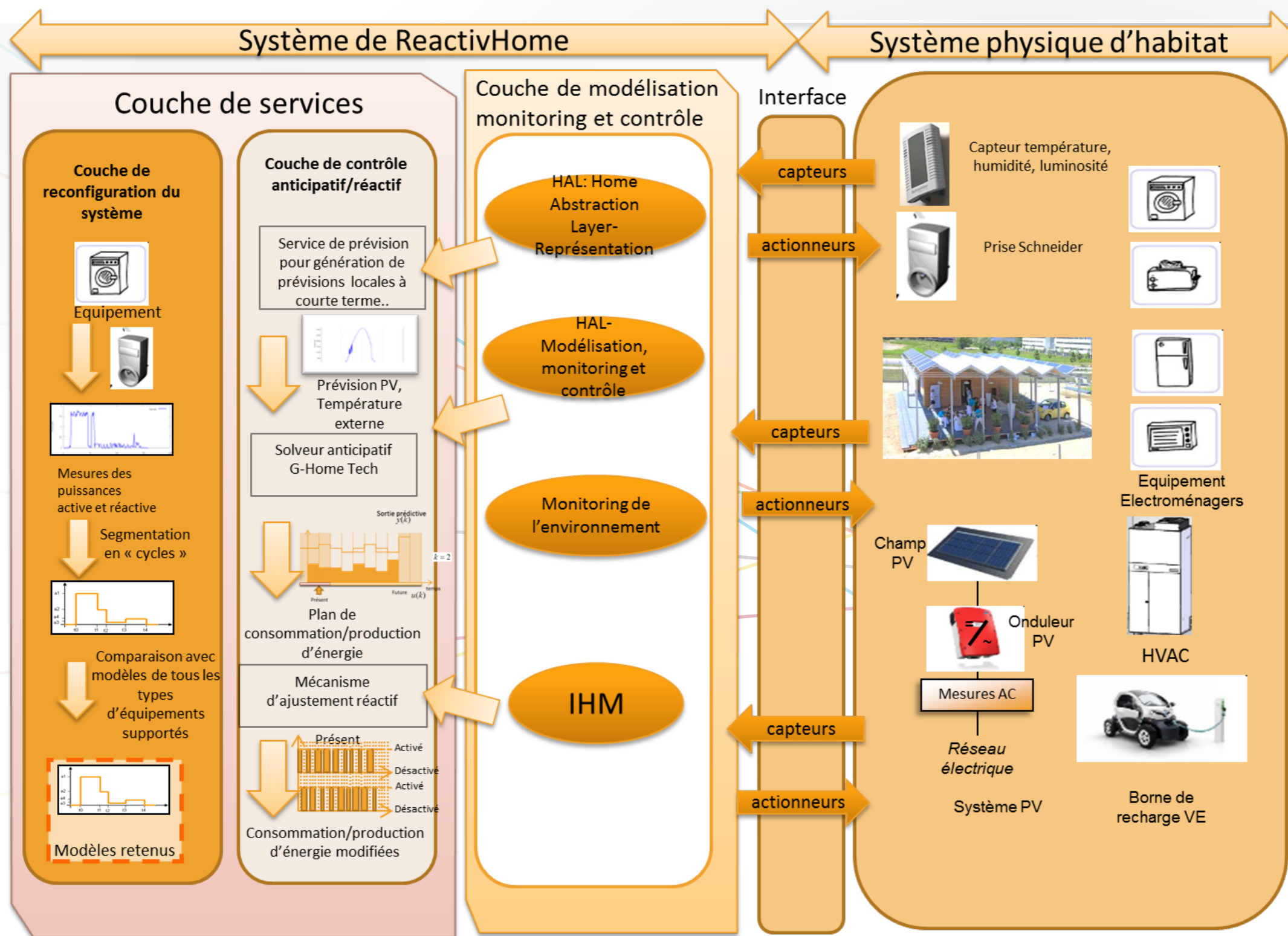
easy deployment of Building
Energy Management System
is a key requirement



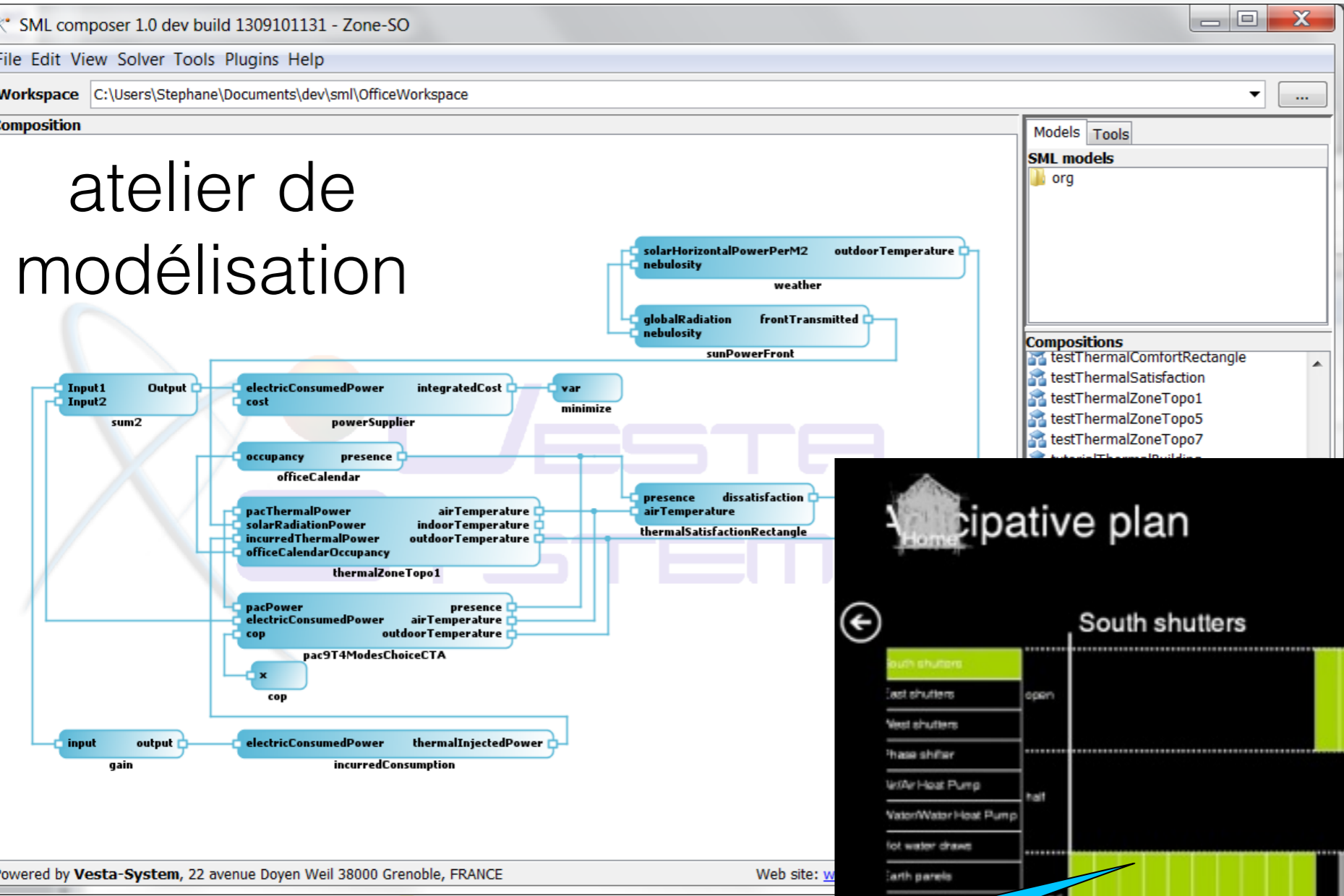
- auto-discover
- auto-learn
 - appliances et components
 - usages (preferences et habits)
- auto-repair

- gestion énergétique globale à base de modèles
- interface générique vers zone de vie
- atelier de modélisation
- reconnaissance automatique et apprentissage
- prédiction de production locale
- adaptation de matériels (capteurs & actionneurs)
- développement d'une IHM générique
- démonstration

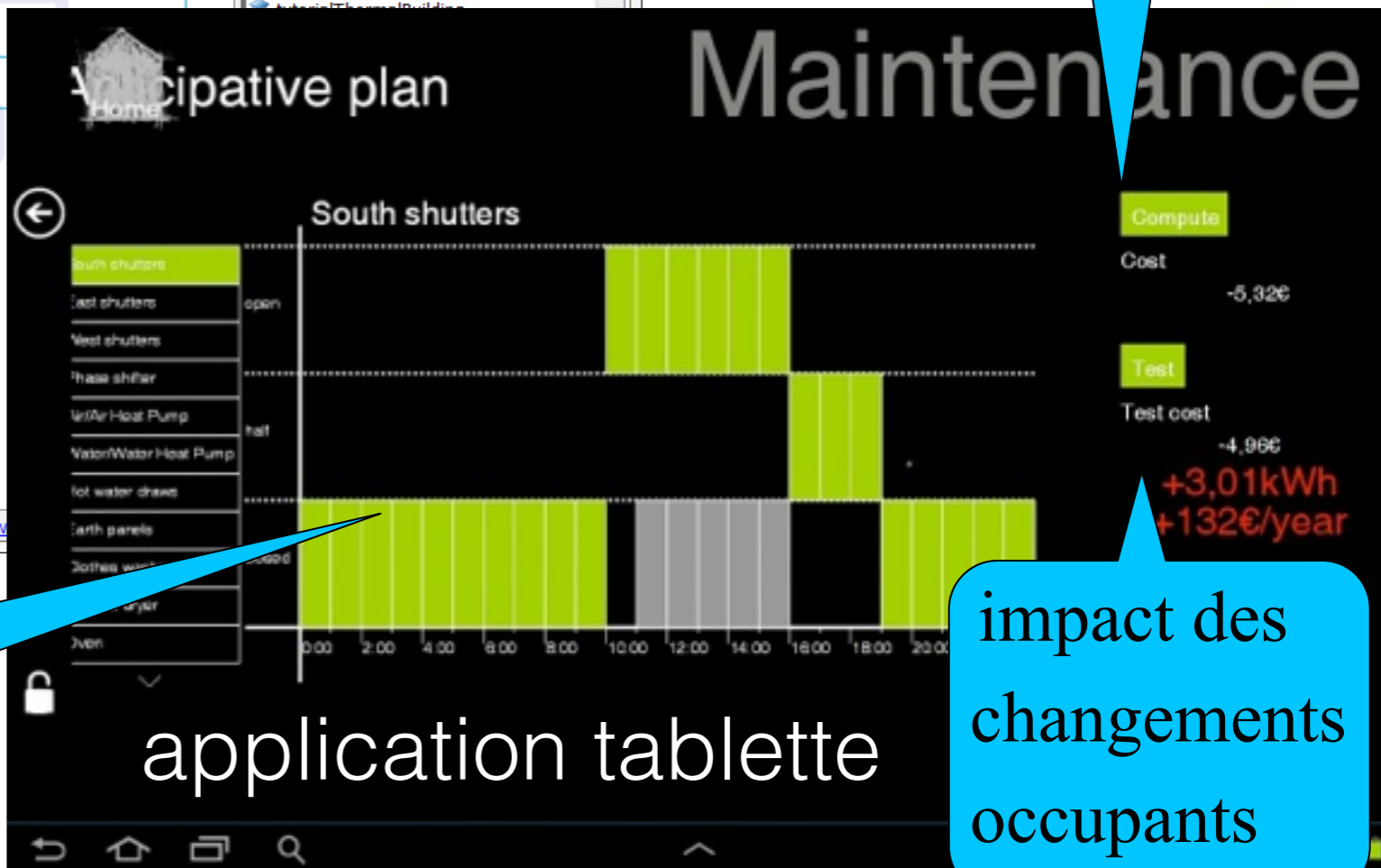
Résultats attendus / obtenus



Résultats attendus / obtenus



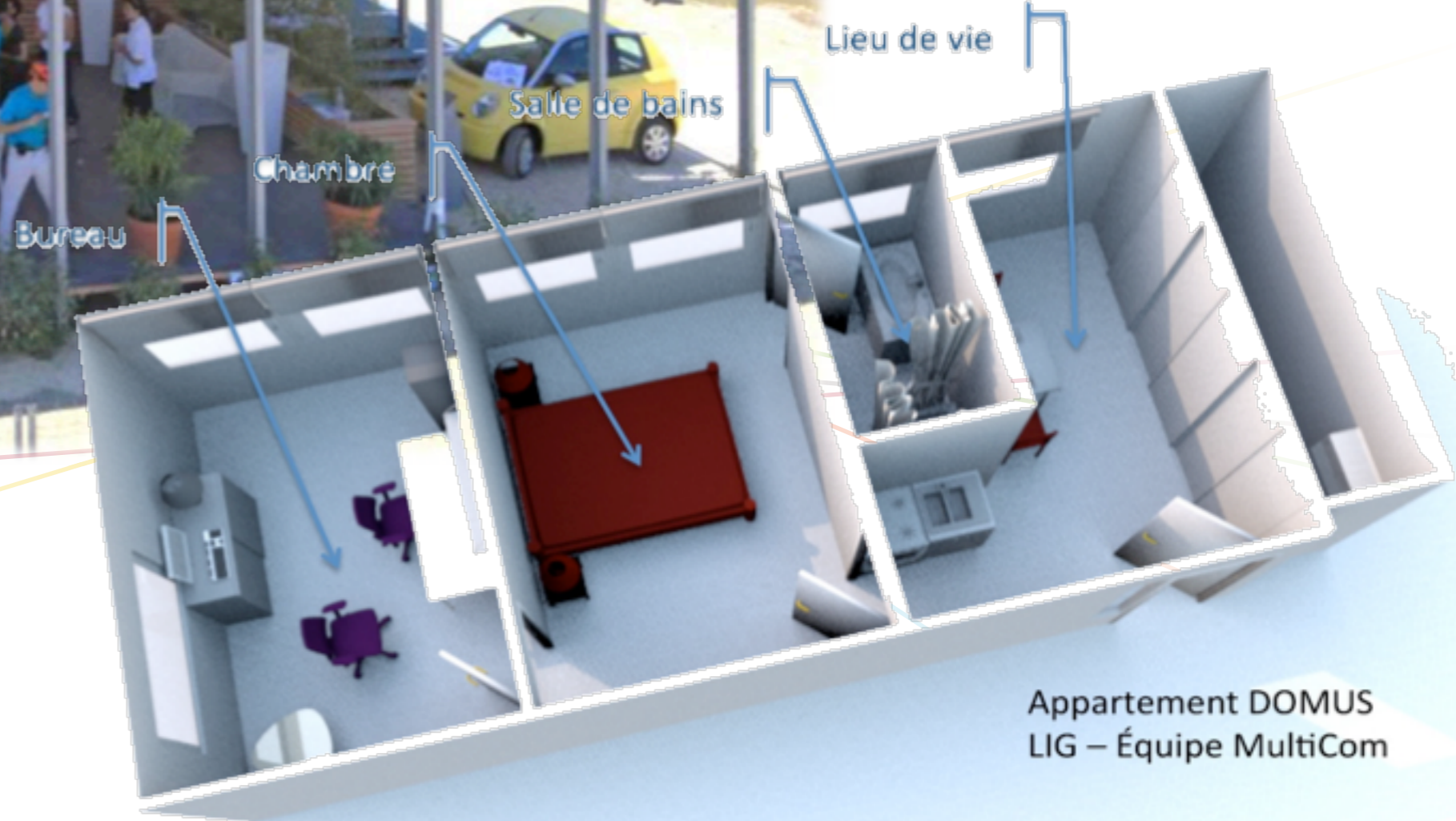
re-calcul de stratégies sous contraintes occupants



proposition de stratégies énergétiques

impact des changements occupants

Résultats attendus / obtenus

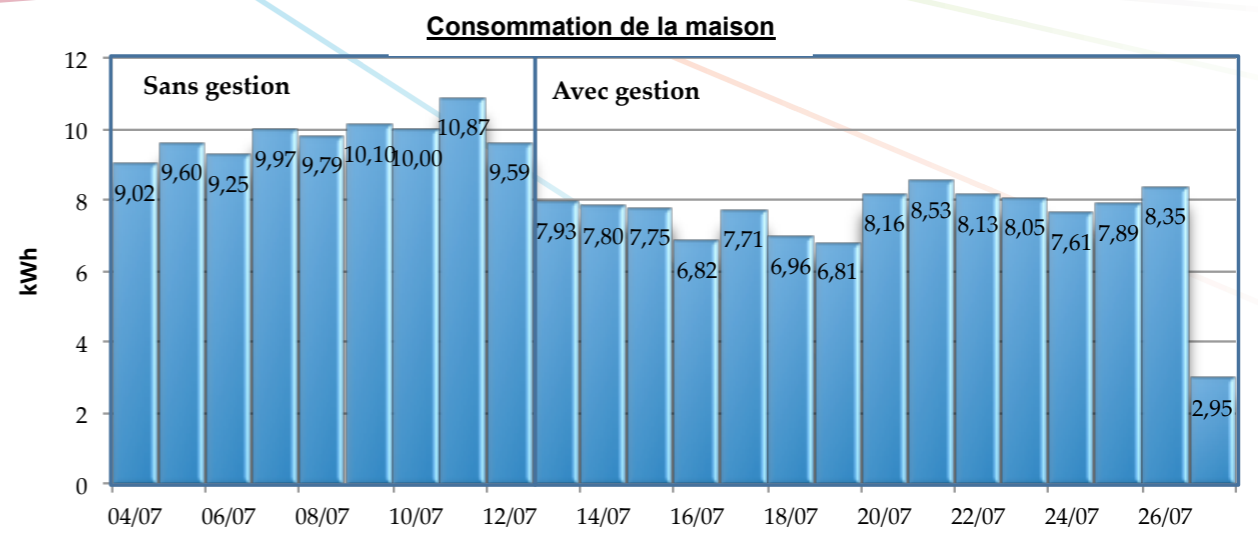
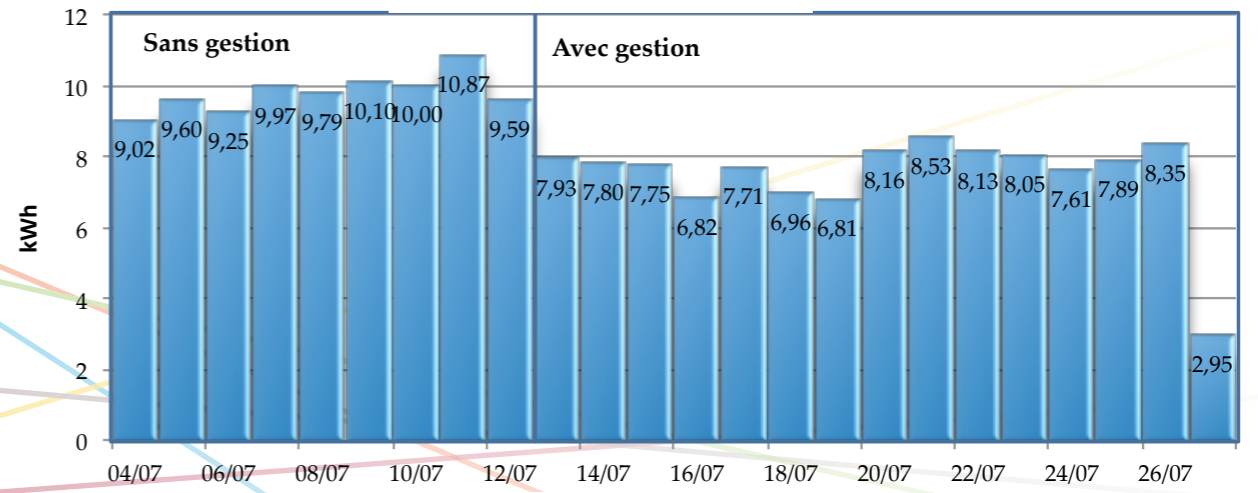


Appartement DOMUS
LIG – Équipe MultiCom

Impact du projet



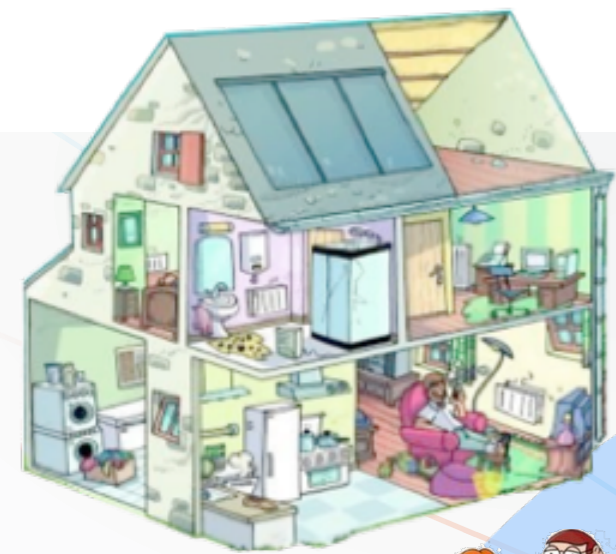
Consommation de la maison



- INP Grenoble
- adaptation SDE Canopea
- création Vesta-System en 2011
- Smart-Energy: interactions
- Orange
- intégration Smart-Grid
- Schneider
- évolution produit
- INES
- intégration V2H



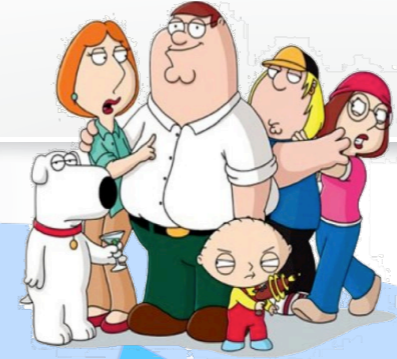
perspectives



management plan
computation...



I am at your service..
Here is a plan? Do you
agree?



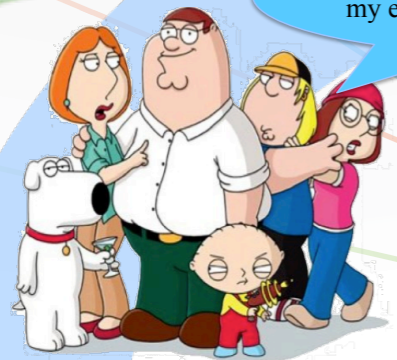
simulation plan
computation...



What will happen if I use the
washing machine at 8pm instead
of 11pm?

What is the best plan to save
my energy consumption today ?

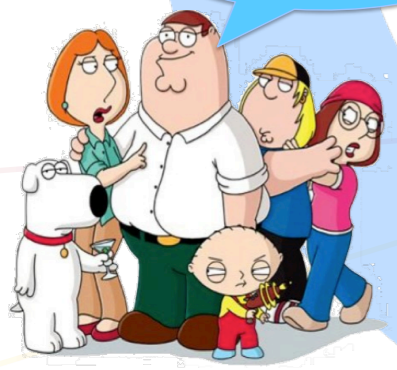
In this case, you have to pay an
additional 1.5€ or you have to lower
your living room temperature from
22°C to 20°C? Your preference?



- MIRROR
- SUGGEST-AND-ADJUST
- EXPLAIN
- WHAT_IF
- DIAG&RECOMMEND

Now, I'm cold in
the living room!

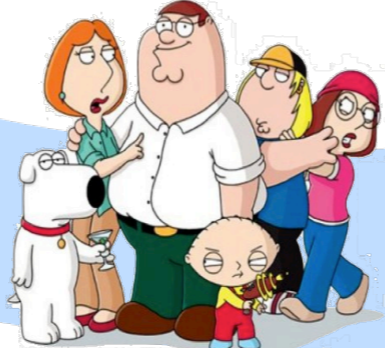
ok for the first
solution



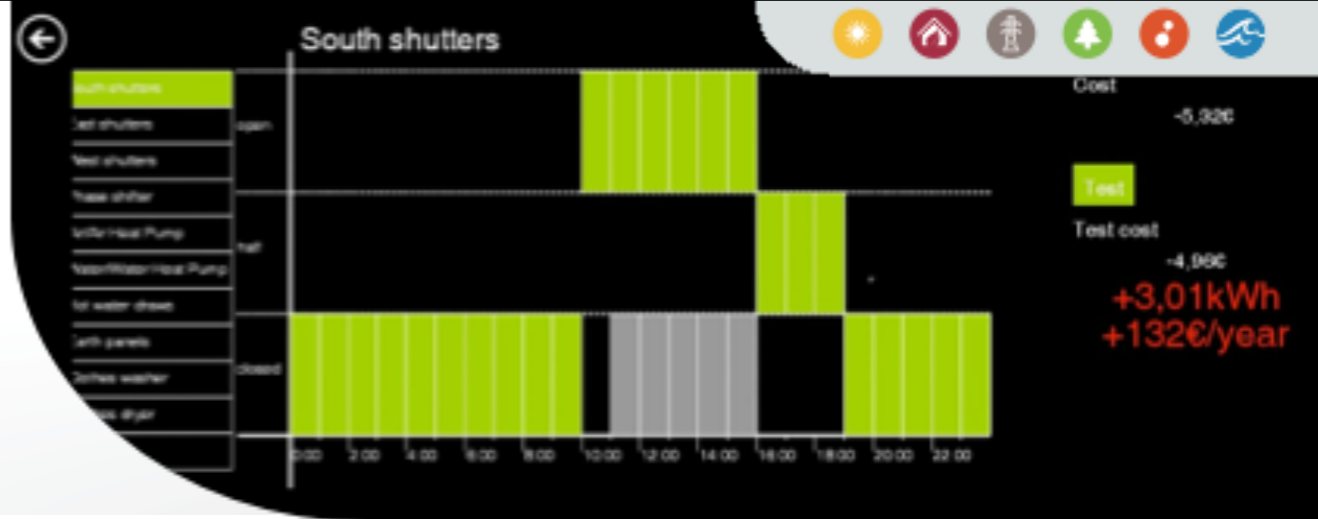
2 proposals:
-go to your room
-start the electric heater but it will
increase cost by 2€

No, I need it for a
shower afterwards!

I must take the heat
from the hot water
tank. Do you agree?



Journées Collaboratives
Bâtiment
10 & 11 décembre 2013 - Chambéry



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