

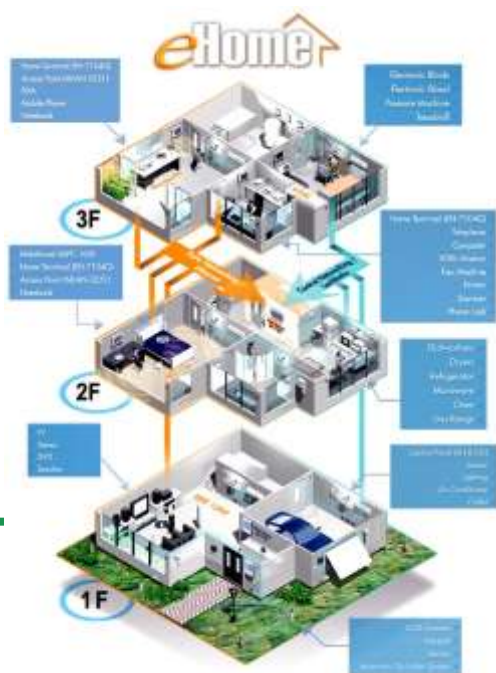


From Homes through neighbourhoods to CITIES

ICT4SH Nice 2010

The Problem

- A home alone helps....but it is not enough!



- Aggregation of data
- Internet Access
- Security
- ...

- Energy networks do not match Telco networks
- Data Mining
- New Sensor infrastructures
- Diverse service domains





Home

Neighbourhood

CITY



HOW WE DO IT IN BEYWATCH...

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ict for
sustainable
homes

At Home



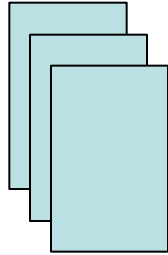
CPS/RES

PV Panel



Solar Collector

Service Providers



Home Control & Automation

Entertainment & Surveillance Services

BeyWatch Agent Platform



Residential Gateway

Electricity grid



green electricity flow

DC

AC

'normal'

Hot Water Tank



'fast'

hot water flow



Bath/shower

'grid'

'home'

normal electricity flow

Smart meter



Commercial Watchers



Washing Machine

Dishwasher



Fridge Freezer

BeyWatch White Appliances



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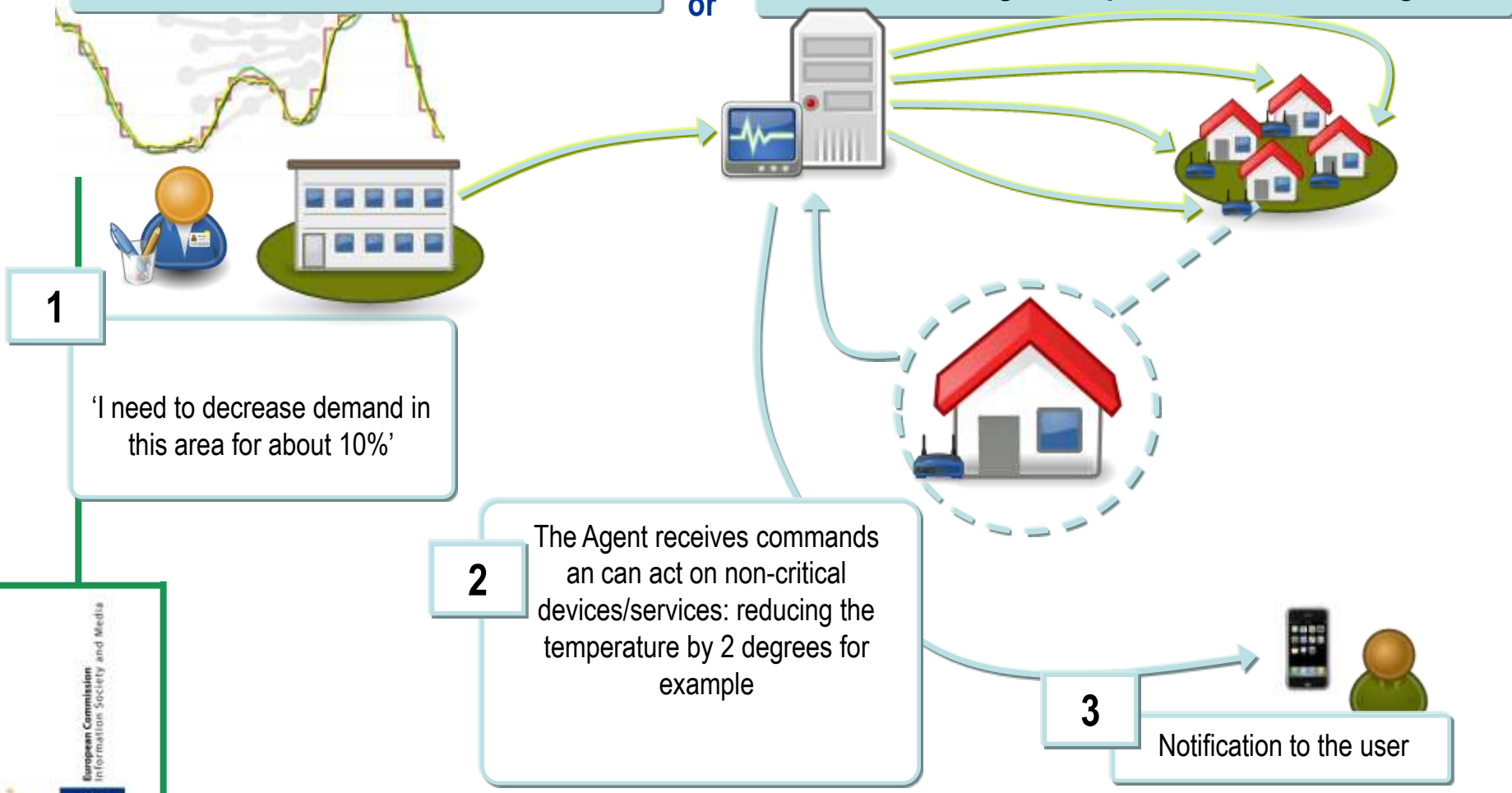


In Neighbourhoods...

New Tarif Models

and/
or

Active Management per individual dwelling



To Cities -> Modelling & Simulation

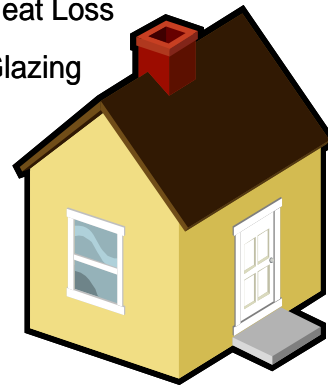
ENVIRONMENT

- Temperature
- Solar Flux

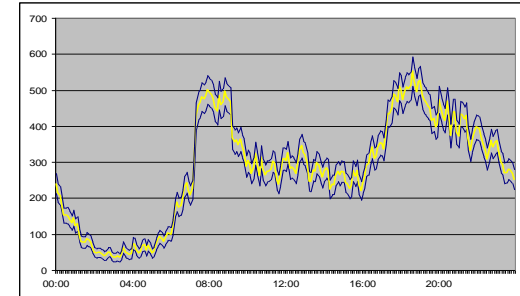


BUILDING

- Size
- Heat Loss
- Glazing



CONSUMPTION PROFILE



- Gas
- Electricity
- Generation
- Mean/SD

APPLIANCES

- Power Consumption
 - On
 - Standby
- Efficiency
- Programme/Cycle



USERS

- Number
- Activity Profile
- Energy Efficiency Attitude



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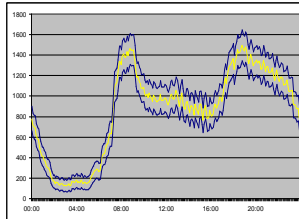
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To Cities... Account for diversity

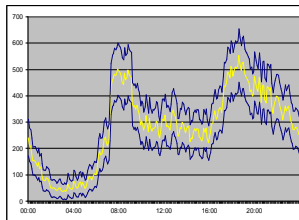


Large House



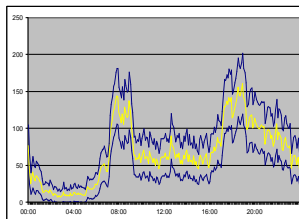
$\times N_{\text{large}}$

Medium House



$\times N_{\text{medium}}$

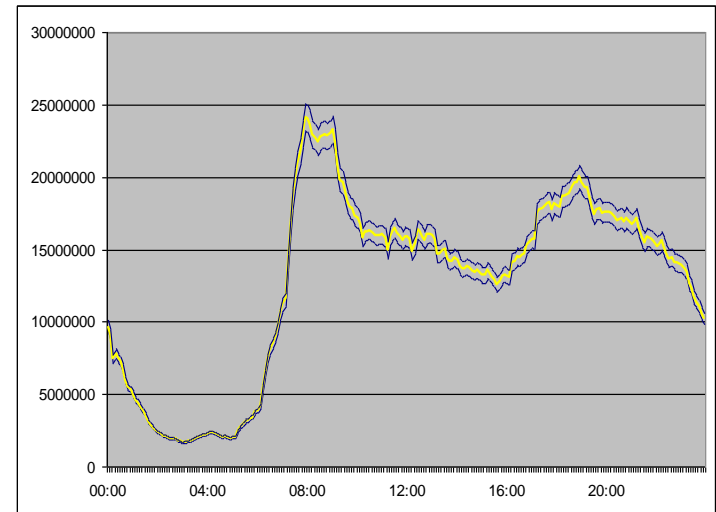
Small Flat



$\times N_{\text{small}}$

DIVERSITY

Street/Neighbourhood/Network



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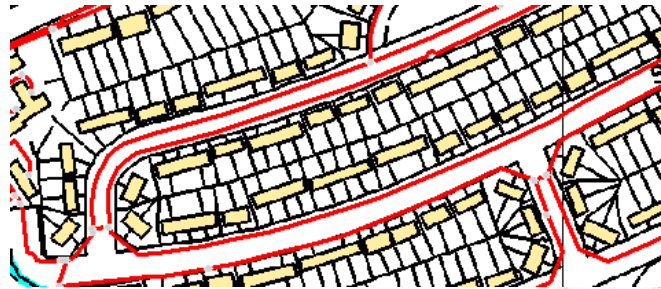
7



- Start small! – a single house.



- Then, a street.



- An area.

- Finally – the whole town.



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The Speakers



- Wilson Wei-Hsein LAU; IIR (Singapour)
- Rafael Socorro Hernandez; (Acciona- e-Diana Project)
- Herve Haro; (Orange, SmartImmo Project)
- Gilles Privat; (Orange)
- Prof. Anibal de Almeida; (, ENERsip Project)



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