

# EVALUREBA project

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EBC Annex on Building Energy Epidemiology

# Context

## Call from Walloon authorities focused on IEA related research projects – 30th sept 2015



# EVALUREBA aims

**Measure and (try to) explain the EPG for public and non-profit buildings**

**Measure the impact of last decade policies promoting energy renovation in these buildings**

**4 years – 2 full times researchers**

# Why public buildings

**Research : scarcely considered set of buildings**

**Opportunity : UREBA policy : 15 years of data about energy consumptions for >1000 schools, >500 administrative buildings, >200 others**

**... in theory**

# Method



# Data collection

## Gather various sources

UREBA database

A network of 400 «energy managers»

Previous studies about energy flows at regional scale conducted by our partner

Various «energy impulse projects» at municipality scale

«Prosumers» data available

# Data collection

## Consolidate various sources

Aggregate /desaggrated data : detail level, time step, weather influence, ...

Gap filling

Outliers identification

## Output year 1

One DB covering hundreds of buildings for 15 years

# Data quality ? « Funnel » strategy

## 1<sup>st</sup> sampling : online questionnaire

Data acquisition protocols?  
Methodological references?



## 2<sup>nd</sup> sampling : on site interviews

Energy managers point of view on data collection

Bottom-up approach

## 3<sup>rd</sup> sampling : medium term monitoring and EPBD calculation

Impact of building control on EPG?

Impact of occupant behaviour on EPG?



# Data quality ? « Funnel » strategy



## Output year 2

Documentation on the quality of our DB

Recommendation on building energy data acquisition

# Data exploitation

## Measurement of the EPG

Benchmarking of energy performance of public and non-profit wallon buildings

On a subsample (20...40 buildings) : comparison of energy consumption and EPBD energy calculation

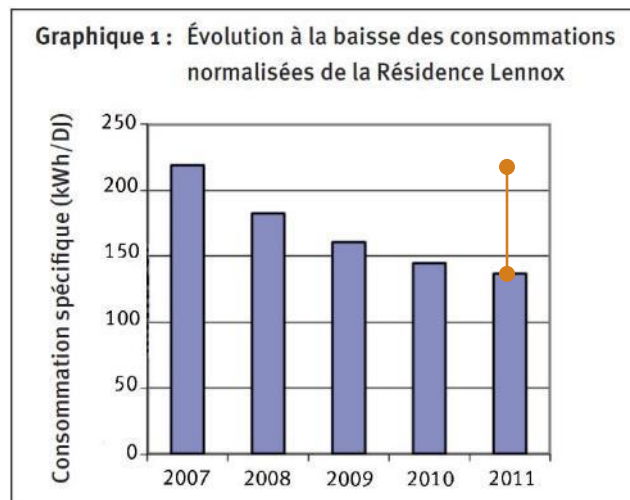
Monitoring results used to support EPG explanation

# Data exploitation

## Evaluation of UREBA policy

Evolution in time of energy consumption

Statistical correlation between energy saving thresholds and specific strategies?



What happened?

# Data exploitation

## Output year 3.5

Reports on EPG for public buildings

Recommandation to improve EPBD calculations

Recommandations to focus energy renovations policies

# Valorisation

## **Close collaboration with regional authorities**

**They'll have a copy of the consolidated database**

**Documentation on technical requirement to update this DB**

## **Seminars and research summaries for policy makers and building managers**