


Energy Monitoring of Social Housing in Kilkenny

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Background

Aim

To assess the effect that energy efficiency upgrade measures undertaken by Kilkenny CoCo has on energy use and indoor environment quality in Social Housing

Effect of Upgrading

Comfort

Energy Use

Airtightness

Psychrometrics

Air Quality



Energy Use in Dwellings

Social

Technical

Economical



Technical

Change in Dwellings



Objectives

Establish actual energy use patterns in each of the dwellings and analyse the variables that effect usage;

Assess the effect of current upgrading techniques on energy use, indoor environment and thermal comfort;

Compare with predicated BER and airtightness testing.

Methodology

Develop longitudinal study over two years, allowing real time energy and indoor environment monitoring over two heating seasons, both pre- and post retrofitting works



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€100 million investment in programmes to support efficiency upgrades in older homes (DCENR, 2009)

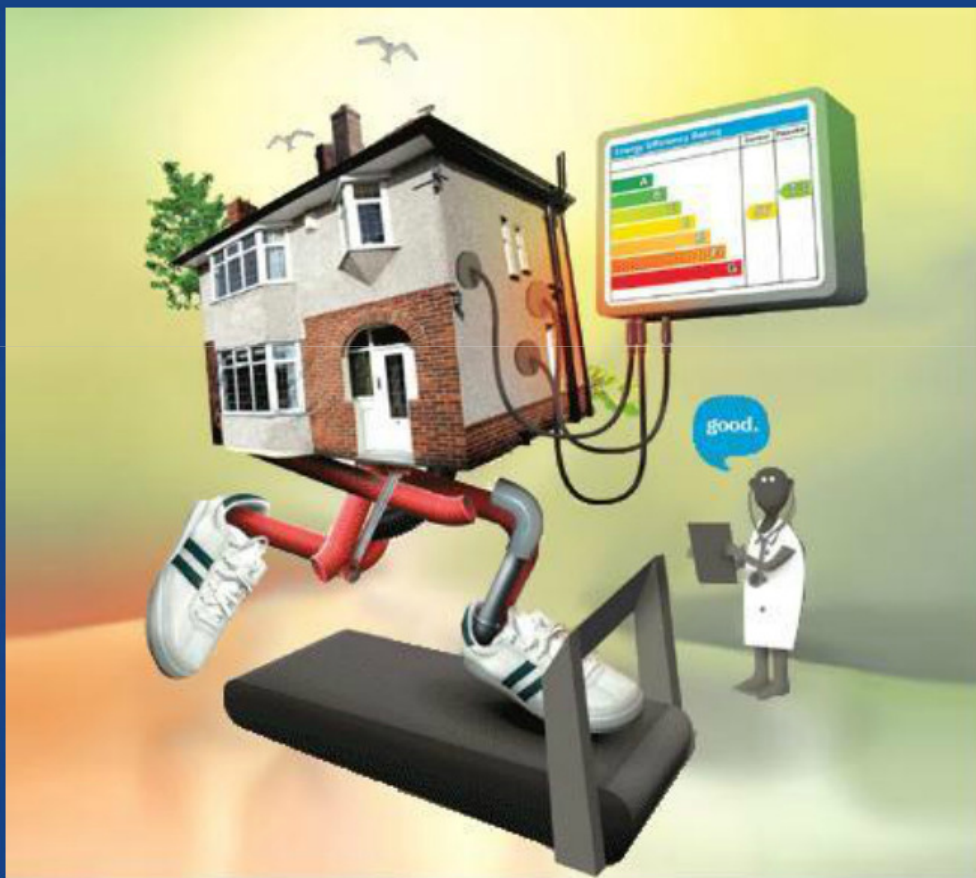
Funding Provided to Local Authorities via the Social Housing Improvement Programme

Pilot Study Waterford City Council

Kilkenny County Council

DCENR 2009. Maximising Ireland's Energy Efficiency: The National Energy Efficiency Action Plan 2009 – 2020. Department of Communications, Energy and Natural Resources. Dublin.

Social Housing Improvement Programme

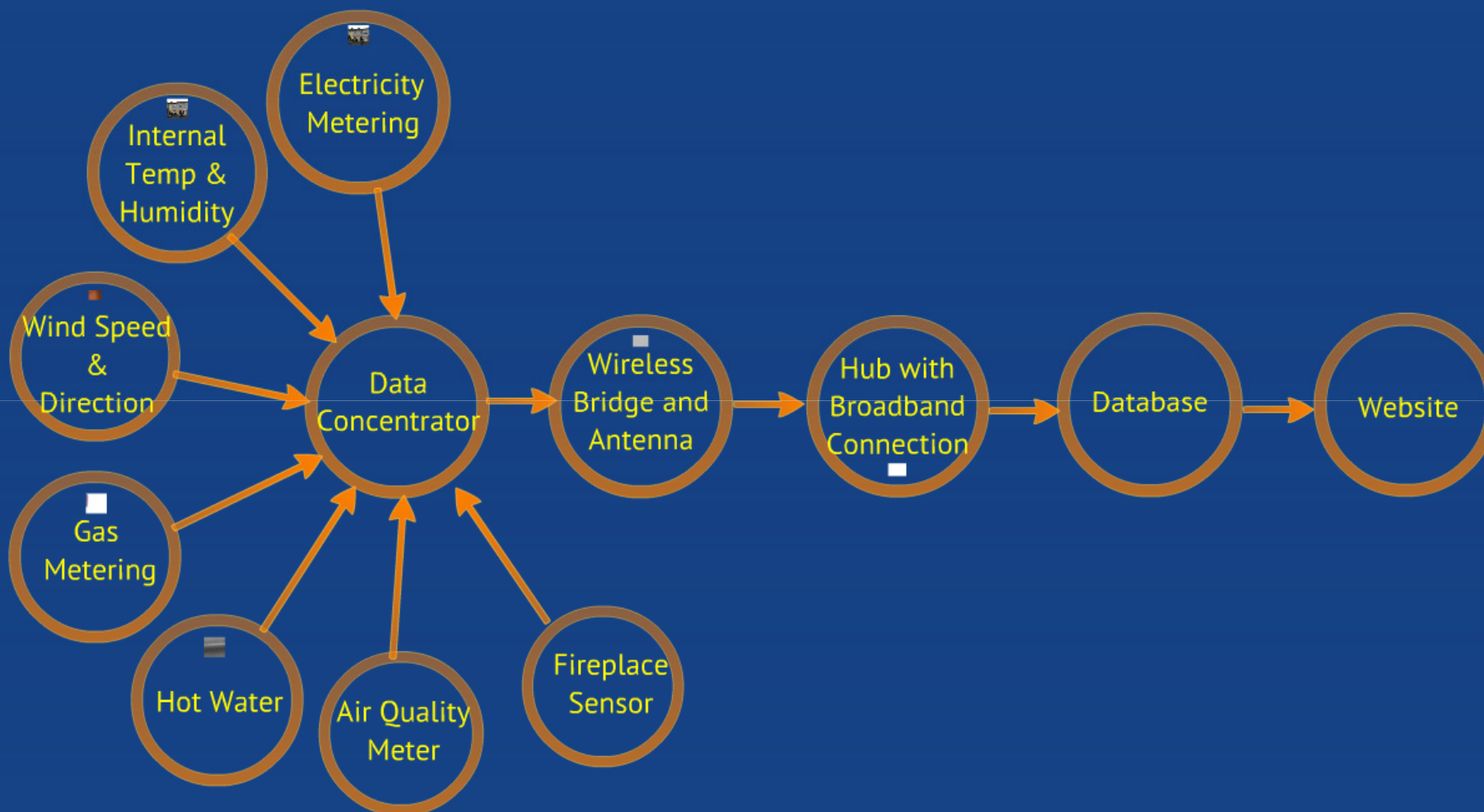


Funding
Energy Saving
Kwh/m²/yr

Grant Ceiling
Euro

300	90%	18k
200 - 300	90%	15.5k
100 - 200	75%	11.5k
50 - 100	50%	6k

Measured using DEAP





Conclusion

Dearth of empirical data

This work represents a detailed attempt to establish a real energy use and environmental characteristics attributable to social housing in Ireland;

The study will yield an understanding of the complex interrelationships between the various end-uses of energy and occupant behaviour;

The results can be used to explore the best possible options for cost effective upgrading

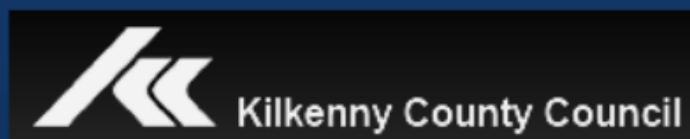
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