





Contents

- 1. Research questions & sample size
- 2. Improving building performance (how and why?)
- 3. Improving energy awareness
- 4. Conclusions
- 5. *Recommendations*





RESEARCH QUESTIONS

More efficient	Energy Consumption	CO2 Emissions	Water		
B					
D			D	C	
F		E			
E Less efficient					
Data 2008	33 KWh/m	1 Hyear	62 kgim ^s iyear	148 Nm ^a lyear	
Towards a class A buildi	ng		Energy	CO: Water	
Simple actions	Technical	solutions			
YOU can help reduce the energy and consumption in this building today by 1 more!	water Ensure heating 0 % or conditions and m Set computer a	a controls suit we hatch occupancy times erver to shut down terr	ather EE		- C
Please use energy in a sensible way - Close doors and windows whenever po - Always turn off the lights when leaving	when not being issible! Check 'sleep n a room! photocopiats -	used. node' settings on printe -install	ins and	2001	1007
- Report dripping water taps to the caret	aker! programmable necessary. Adjust.compu	 7-day timers to switcher monitor settings to t 	ch off if En	ergy sources	50
	rather than ge	o to screen saver mode			15.
				Fastil	Ronawalale
	Lu Council				1
Durnam Coun	ty obuiton				1.4.1
RESOURCES					

- What drives the improvements in building performance . . .
- ... technical improvements or the behaviour change of building users as a result of building energy certificates such as Display[®]?

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• Is it both

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A technical improvement <u>is</u> the result of someone's behaviour being changed, be it the facilities manager, finance director, energy manager or mayor.



RESEARCH SAMPLE

- Detailed building surveys: 751 buildings are selected from 5586 buildings
- 383 responses
- Final 'cleaned' data: 286
- Pre & post communication surveys:

Municipality	Country	No. of Respondents
Fealthy Cities Inomerice	Czech	165
Fealthy Cities Koprivnice	Czech	83
Kaunas	Lithuania	22
Milton Keynes	England	18
Bristol	England	115
Cark	Ireland	2.24
Helsin ki	linland	35
Salerno	Italy	844
Udine	Italy	484
Total		1990

Pre-survey

Post-survey

Municipality	Country	No. of Respondents
UK – Ireland	UK – Ireland	20
Helsin ki	linland	10
Salerno	it aly	168
Udin≜	it aly	170
Total		368

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WHY BUILDINGS IMPROVE?

- The second phase of our analysis was to select a sample of buildings for closer inspection and to understand the specific reasons why some buildings have improved, and some deteriorated.
- Are there common factors that appear to lead to improved energy performance?
- This same sample was then analysed for its communication activities and a further set of common factors were identified that appeared to lead to improved energy performance





IMPROVING BUILDING PERFORMANCE – TECHNICAL IMPROVEMENTS







IMPROVING BUILDING PERFORMANCE Impact of communication campaign on buildings







IMPROVING ENERGY AWARENESS







CONCLUSIONS

- Display® has led to demonstrable increases in building performance and energy awareness. But . . .
- There is no one single measure or 'quick-fix' for moving buildings 'Towards Class A'.
- The importance *and* success of Display® is in recognizing that the poster is merely a beginning of the journey 'Towards Class A'.

Buildings in Display® that improve . . .

- 1. Invest in multiple refurbishments especially lighting controls and boiler replacement and avoid using air conditioning;
- 2. Invest in new types of building controls especially heating controls;
- 3. Have a full time energy manager and voluntary environmental champion;
- 4. Organized local media campaigns and used creative promotional materials;
- 5. Attended local and national networking events such as 'national users club event'







(FOR MUNICIPALITIES AND POLICY

- 1. Appreciate the benefits a whole system approach to energy management can have. Participation in Display® Campaign and producing posters is an important tool to be used by energy professionals to encourage behaviour change.
- 2. Clear guidance is required for what constitutes effective technical improvements not all interventions are equal.
- 3. Local, national and European engagement with stakeholders is vital.
- 4. A need for harmonization of national (and European) certification both in terms of calculation methodology and appearance.

Certification is just the start, not the destination. Not 'a box to be ticked' but a starting point to engaging building-users inc. decision-makers and facilities managers to teachers and schoolchildren.





Thank you, and congratulations to Display®

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