

# Home-meanings framework to analyse the diverse benefits of low-carbon dwellings

## Background

One important strategy to reduce operational energy use in dwellings and mitigate climate change is to motivate homeowners to retrofit. Building research and policy typically neglects **emotional** aspects of how homeowners make sense of the potential benefits of low-carbon dwellings.

## Methods

Thematic analysis of: (i) 8 interviews with SuperHomes owners, who achieved significant carbon emission reductions through retrofit activities; (ii) 10 interviews with homeowners, who did retrofit of different depth and have expertise in energy retrofit or access to such expertise; (iii) a

workshop with 36 participants, representing various actors (industry, government, intermediaries, academia) interested to advance domestic energy retrofit activities in the UK.

## Theoretical lens

Integrates: (i) homeowner individual frames, (ii) home-meanings framework.

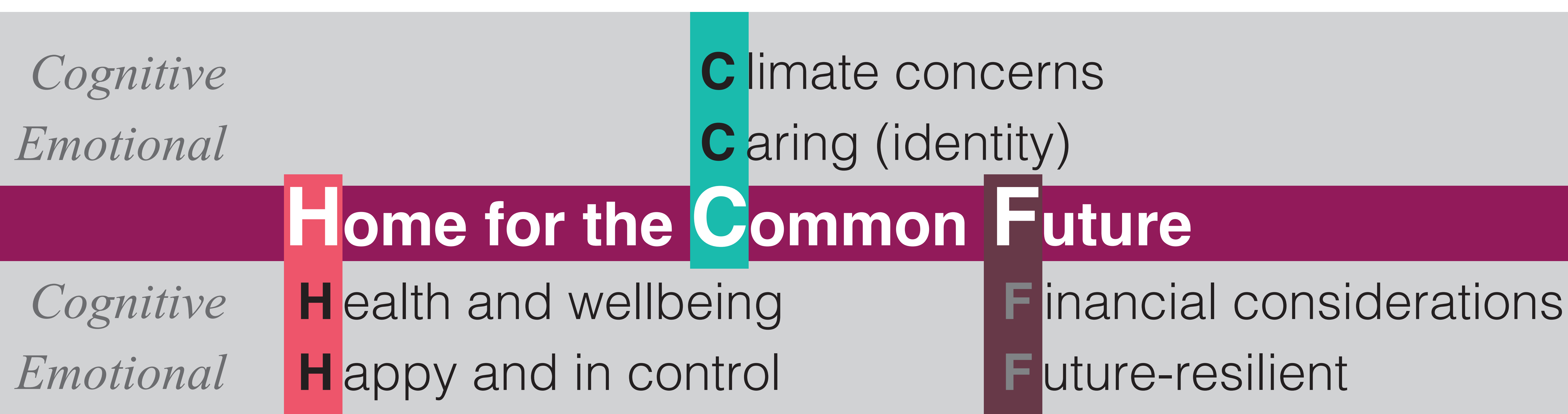


Figure 1: A common individual frame to understand benefits of low-carbon dwellings, drawing on cognitive reasoning and emotional reactions

## Results and conclusions

Use a single individual frame to analyse and promote benefits of low carbon dwellings – **Home** for the **Common Future** (**HCF**). The abbreviation can simultaneously be used to describe motivations involving *cognitive* reasoning – **Health and well-being**, **Climate** concerns and **Financial considerations** (**HCF**); as well as motivations involving *emotional* reactions – **Happy**, **Caring**, **Future-resilient** (**HCF**).

Table 1: Home and low-carbon home: meanings and associations

HOME	LOW-CARBON HOME
Based on Després (1991), Somerville (1992), Mallett (2004)	Based on data collected for the project
<u>Affordance and environment</u>	
Relationships with family and friends, a place to own, shelter (materiality), space, interaction between people	Airtight with mechanical ventilation, good air quality
<u>Perezhivanie (emotional and cognitive experience) and identity</u>	
<b>Happy / Health and well-being:</b> Refuge from the outside world, hearth (warmth), heart (love), privacy, paradise (ideality, sense of spiritual security), comfort, ease, intimacy, relaxation, an active state of being in the world	(Very) comfortable, healthy, warm, quiet, peaceful, health Sterile, not cosy
<b>Caring (identity) / Climate concerns:</b> Reflection of one's ideas and values, indicator of personal status, roots (source of identity), belonging, self and identity	Careful, engaged, understanding, concerned, open-minded, environment-conscious, considerate, proud to have one, responsibility, citizenship, neighbourly, it's much more national than just us, simplicity at all levels, quite modern, minimalistic, Passivhaus
<b>Future-resilient / Financial considerations:</b> Security and control, permanence and continuity	Forward-looking, long-term, sign of time, low cost to run, sustainable, inexpensive to run, efficient, low energy consumption, resilient, sensible
<u>Practice and other activities</u>	
Acting and modifying one's dwelling, centre of activities, practices	

**Acknowledgements:** This research was partially supported by the Economic and Social Research Council (UK) under the project Fast-tracking Low-Energy Use via Retrofit (FLEUR) [grant number: ES/V012606/1]; and by UK Research and Innovation the Centre for Research into Energy Demand Solutions [grant number: EP/R035288/1].

### References:

Després, C., 1991. The meaning of home: literature review and directions for future research and theoretical

development. *Journal of Architectural and Planning Research* 8, 96–115.

Gibson, J.J., 1986. *The ecological approach to visual perception*. Lawrence Erlbaum Associates, Publishers, Hillsdale, NJ.

Kaplan, S., Tripsas, M., 2008. Thinking about technology: applying a cognitive lens to technical change. *Research Policy* 37, 790–805.

Mallett, S., 2004. Understanding home: a critical review of the literature. *The Sociological Review* 52.

Shove, E., Pantzar, M., Watson, M., 2012. *The dynamics of social practice: Everyday life and how it changes*. Sage, London.

Somerville, P., 1992. Homelessness and the meaning of home: rooflessness or rootlessness? *International Journal of Urban and Regional Research* 16, 529–539.

Veresov, N., Fler, M., 2016. Perezhivanie as a theoretical concept for researching young children's development. *Mind, Culture, and Activity* 23, 325–335.