A Case for Comfort
Integrating Energy Efficiency and Universal Design in Home Renovations

Introduction
Energy Efficiency (EE) and Universal Design (UD) are high on governmental policy and research agendas. However EE and UD are largely treated separately in research and practice and have reached only limited adoption in society. This is a missed opportunity for renovation concepts with higher value and lower costs and inconvenience. Based on a literature review, we observe that the goals of governments and policymakers in regards to home renovations, i.e. increasing EE and UD adoption to solve certain societal challenges, are misaligned with those of people, who aim to increase their comfort (Fig. 1). We take a user-centered approach and make use of the concept of comfort to integrate UD and EE. This poster describes our investigation of the meaning of comfort in home renovations.

3. Comfort: Residents' perspective

Three qualitative studies were carried out to elicit the meaning of comfort at home from the perspective of residents: UD professionals at Include 2015 (Fig. 2), Flemish homeowners (Fig. 3 & 4), interior architecture students (Fig. 5).

The literature and qualitative studies reveal three insights:
- Comfort as a combination of Indoor Environmental Quality indicators.
- Comfort as an implicit central objective of UD.
- Comfort associated with both EE-related and UD-related aspects.

4. Comfort - What it could be

The framework brings together the individual objectives of people making decision on their home renovation with the objectives of governments and policymakers in regards to home renovations, i.e. increasing EE and UD adoption to solve certain societal challenges, are misaligned with those of people, who aim to increase their comfort (Fig. 1). We take a user-centered approach and make use of the concept of comfort to integrate UD and EE. This poster describes our investigation of the meaning of comfort in home renovations.

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Results show that:
- Comfort associated with both EE-related and UD-related aspects.
- EE aspects not seen as separate but as part of UD.

Conclusion
Framing discussions on EE and UD as part of Comfort in the Indoor Environment implies a focus on the benefits of home renovation from the perspective of residents. It uses a language that can be more understandable and motivating for lay-people, while at the same time containing the core messages on EE and UD important to professionals, such as academics, policy makers, and designers. The framework brings together the individual objectives of people making decision on their home renovation with the objectives of professionals and society at large.