

A User Centered Design Strategy to Enhance Sustainable Behavior

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Abstract:

This paper proposes a strategic framework that integrates User-Centred Design (UCD) with Design for Sustainable Behaviour (DfSB) to develop products that effectively encourage sustainable user practices. While UCD focuses on optimizing usability and user satisfaction, and DfSB focuses on influencing behaviour, their combination is essential for creating interventions that are both effective and adopted by users. The proposed framework consists of five stages: (1) Identifying Sustainable Goals, (2) User Research, (3) Strategy Selection, (4) Design and Prototyping, and (5) Usability Testing. This framework was explored through a methodology involving focus groups of product design students, resulting in two product case studies: an energy-efficient kettle and a smart lighting system. The findings suggest that a user-centred approach is critical for diagnosing the root causes of unsustainable behaviours and for selecting and implementing behavioural strategies that users find intuitive and acceptable. The paper argues that this integrated approach can bridge the gap between behavioural intention and action, leading to more successful and human-centred sustainable design outcomes.

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