

Bringing together digital twin: How can we connect customer preferences with product characteristics?

- Ecological Sustainability is more than ever before. In society, we recognize that the awareness for ecological sustainability increases
- However, studies show that there is a gap between one's desire towards a behaviour change and a real impact. Most often, customers lack transparency, i.e. the impact of single actions is not obvious, people do not have an adequate overview of their individual footprint in general, and we lack metrics that make alternative purchase options comparable in a simple way. Traditional approaches, e.g. labels, simplify complex issues to facilitate decision making. However, they neglect relevant characteristics.
- Digital Twins can help to solve this issue. They can reflect product characteristics and the values of individuals. Bringing both together may help people to take better decisions for themselves and our overall behaviour as society.



<https://hub.packtpub.com/wp-content/uploads/2018/04/iStock-541282164-696x493.jpg>

Forschungsfrage

Which design objectives do we need to consider to develop a solution that enables individuals to take more ecological sustainable decisions based on a digital twin? *

* beispielhafte Forschungsfrage (kann im individuellen Austausch spezifiziert werden)

Vorgehen / Literatur

- Design Science; Identifikation aller Stakeholder für einen konkreten Anwendungsfall (z.B. Einkaufen im Supermarkt); Ableiten der Anforderungen aus Kundenperspektive, um eine praktikable Lösung zur Verfügung zu stellen; Ableiten der Herausforderungen in Bezug auf andere Stakeholder
- Verschiedene Möglichkeiten, um Design Objectives abzuleiten (Interviews, Literaturrecherche, Übertragung aus bestehenden Lösungen)
- Vorhandene Literatur: Glatt et al. (2021) Edge-based Digital Twin to trace and ensure sustainability in cross-company production networks; Jones et al. (2020) Characterising the Digital Twin: A systematic literature review; Pigni et al. (2021) Digital Twins: Representing the Future

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