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Preference mapping for product optimization: a case study

Understanding how technical product characteristics translate into consumer perception remains a key challenge in product development. This study presents a case study in which preference mapping techniques are used to explore the relationship between laboratory-based technical measurements and consumer evaluations.

A set of products was characterized through a series of objective instrumental measurements collected under controlled laboratory conditions. In parallel, consumer data were collected to assess perceived performance and overall product preference. Preference mapping was then applied to model the relationship between the technical variables and the consumer responses, enabling the identification of the technical drivers associated with higher consumer liking.

The resulting maps provide a visual and analytical representation of how products are positioned in the space defined by instrumental attributes and consumer preference. The analysis highlights which technical characteristics are most strongly associated with favorable consumer evaluations and illustrates how preference mapping can be used to bridge the gap between laboratory measurements and consumer perception.

The case study demonstrates how combining technical data and consumer research through preference mapping can support product optimization and guide product development toward configurations that better meet consumer expectations.

Special/ Invited session

Classification

Mainly application

Keywords

Preference mapping, consumer perception, Product development

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