

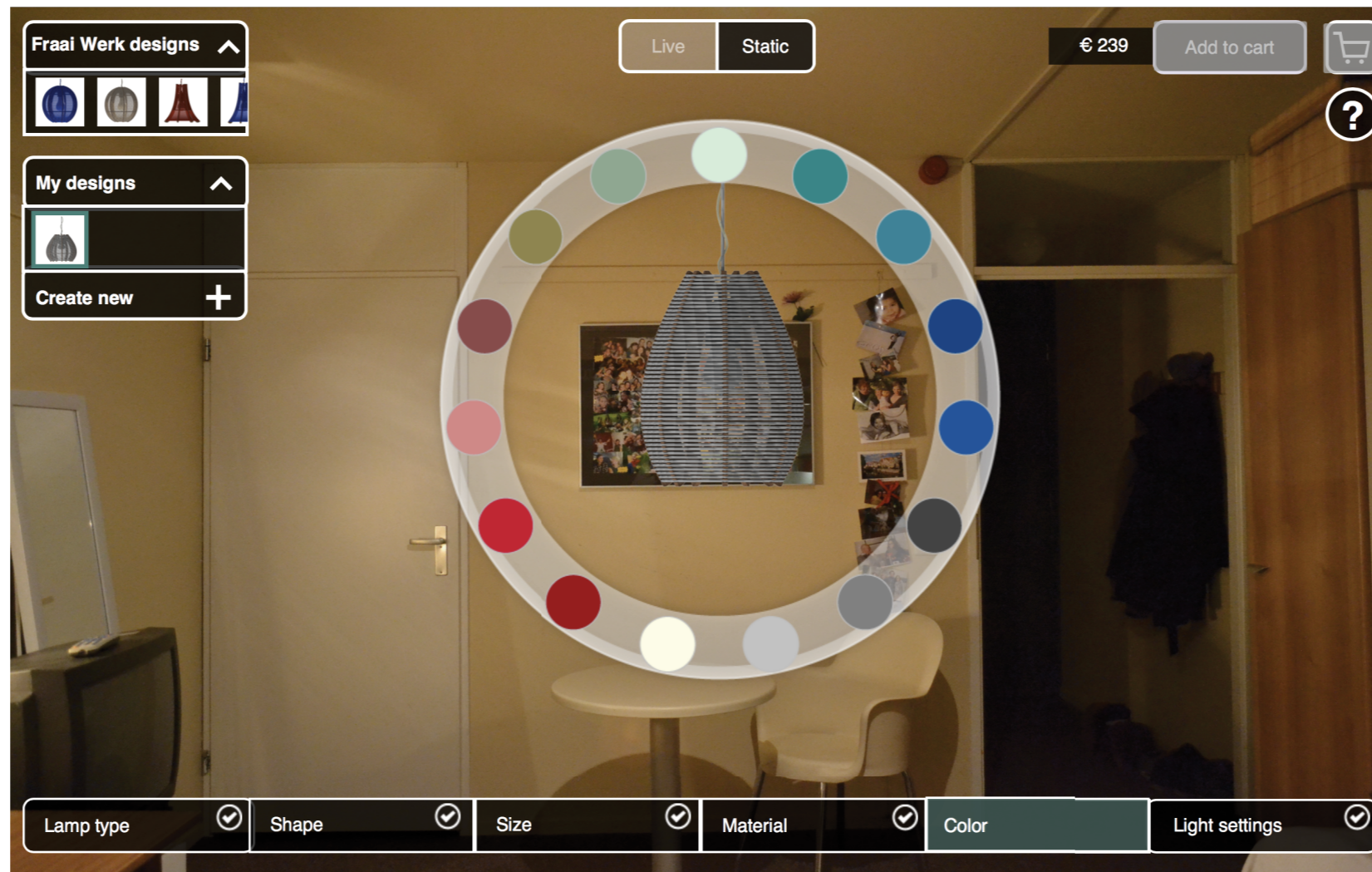
# Understanding User Customization Needs: Requirements for an Augmented Reality Lamp Customization Tool

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3D model presentation in context using AR



Inspiration and help, freedom and support, trustworthy visualizations



Hands-down comfortable customization

## Introduction

- Customers perceive the value of self-design products as higher when they meet their preference system (preference fit).
- To ensure the delivery of personalized products with high preference fit, users must have access to customization tools.
- User requirements were gathered for the design of an Augmented Reality (AR) application for lamp customization in context.

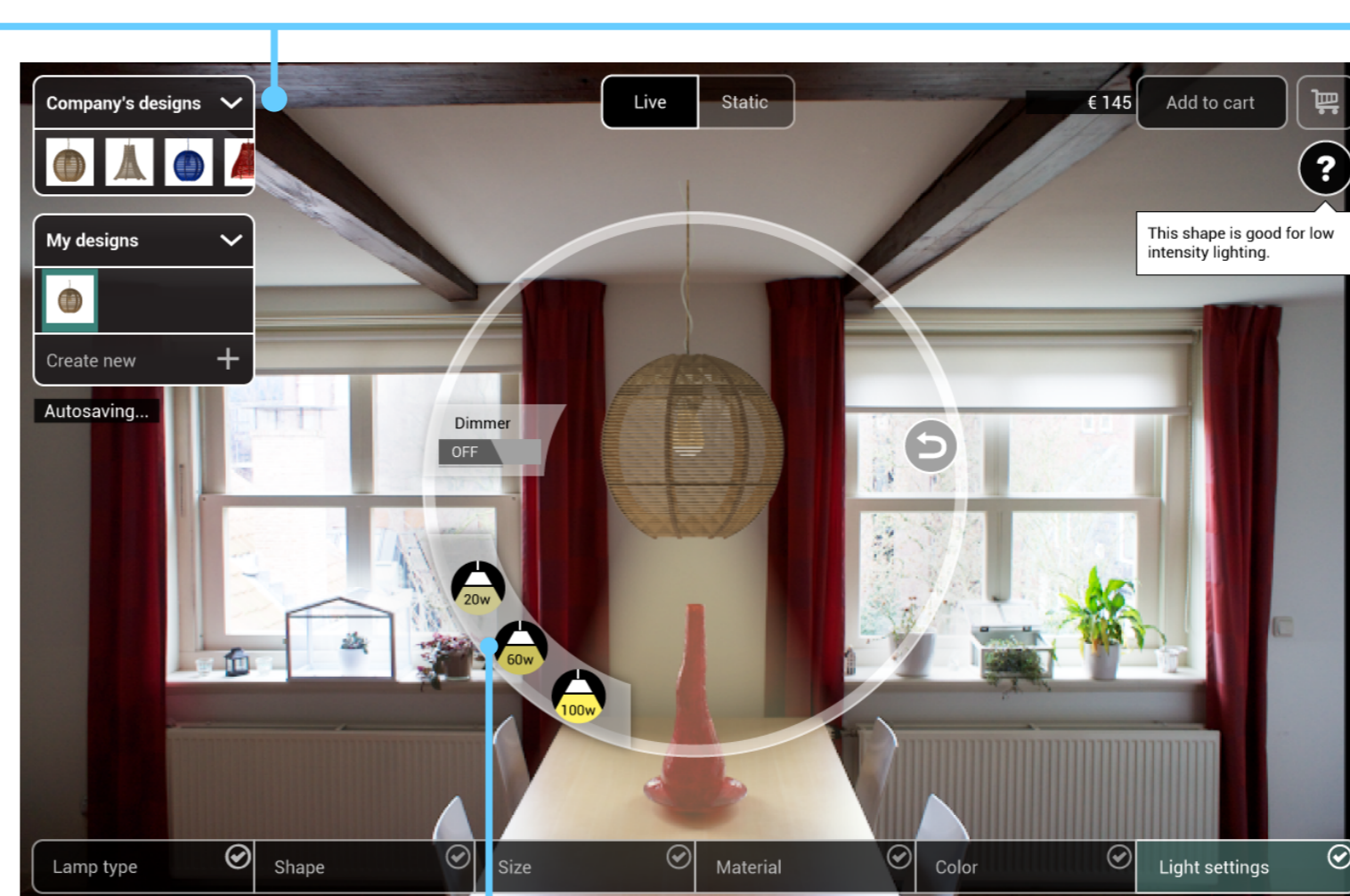
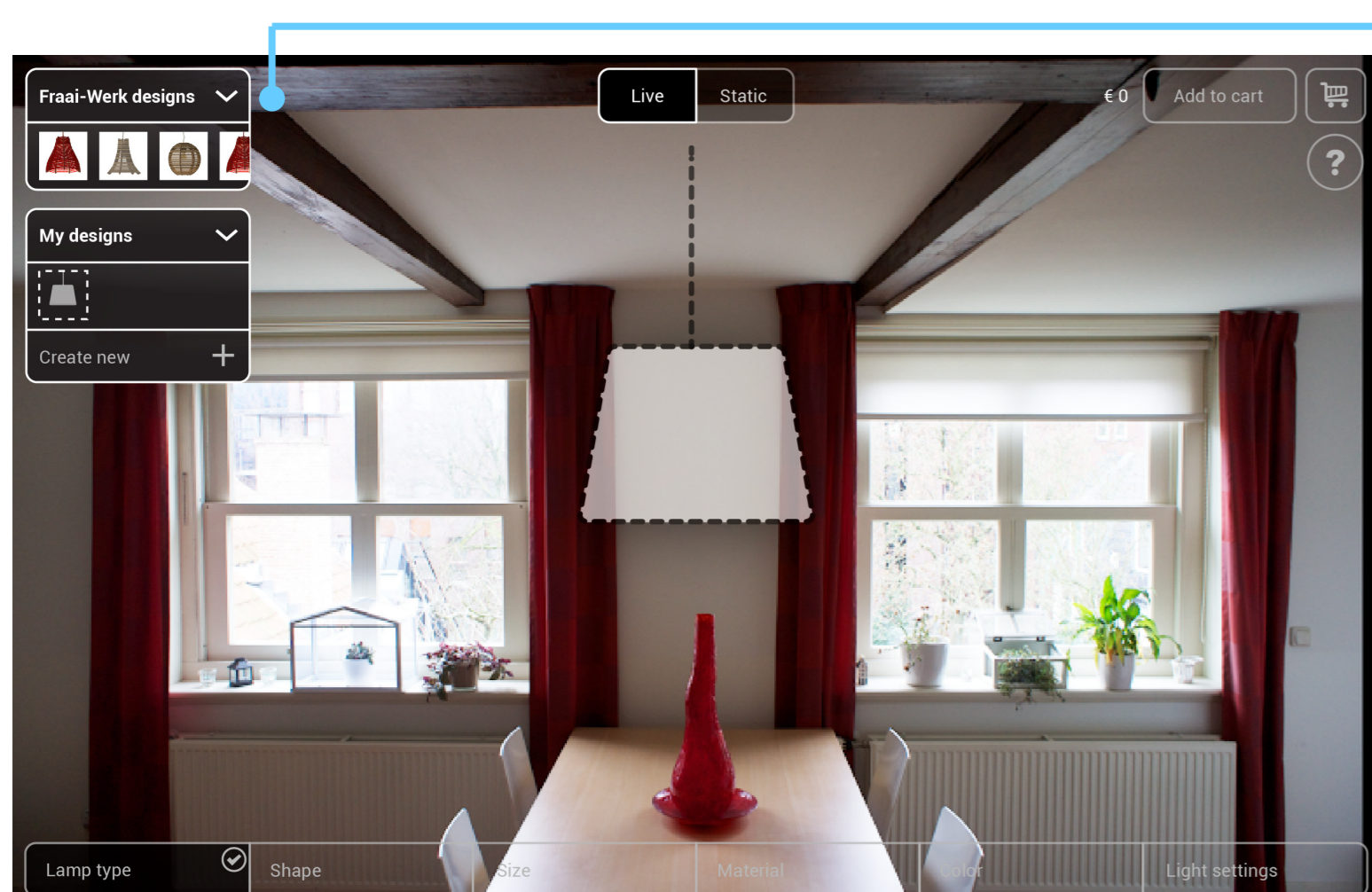
## Methods

- A Literature Review (LR) provided general requirements.
- Contextual Inquiries (CI) explored users' thoughts and interests on customizing products.
- A participatory study (Co-constructing Stories, CCS) gained more insights into the customization process of lamps in particular.
- A Survey (S) was conducted to prioritize user needs and to define a final set of requirements.

## Requirements

General requirement	Description	Source
Limited options at a time	Between 6 and 11 options at a time.	LR, CI
Different starting points for different users	(1) scratch or free-form interface; (2) a model or combined configuration; and (3) a pre-designed alternative.	LR, CI
Trustworthy visualizations in context	Increasingly richer, realistic visualizations in context to let the user understand the final outcome.	LR, CI, CCS
Overview of the options for decision-making support	Side-by-side comparison of saved configurations and their characteristics.	CCS
Price and value	Price visible to account for every change.	CI, S
Customer-designer relationship support	A designer or expert should be available to guide or advise the customer.	CCS
Post-editing and iteration possibility	Iterations in the design process, bookmarks, and going back to previous designs.	CCS

## Proposed design features



- Multiple starting points
- Tips on customizable attributes
- Limited number of choices per level