



Magnolia: Clarity For The Conscious Online Shopper

Helen Feng

fenghelen@g.ucla.edu

Jocelyn Cheung

jocelync@g.ucla.edu

Meagan Clarke

megclarke@g.ucla.edu

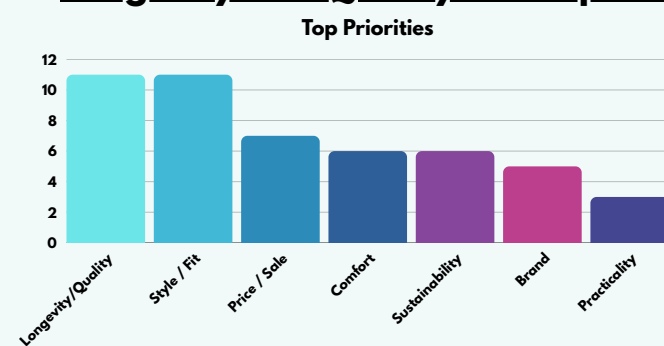
User Research

15 User Interviews → 4 Core Themes

Goal: Understand how people incorporate sustainability into everyday decision-making and what factors influence their clothing-purchase choices.

Outcome: Identified a diverse range of needs and behaviors, shaped by participants' varying sustainability knowledge, shopping habits, and financial resources.

1. Longevity and Quality Are Top Decision Factors



Regardless of differing lifestyle attitudes toward sustainability, **73%** of users desire high-quality, durable clothing items. This preference spans all three personas, though some may compromise on durability when presented with significant discounts or low prices.

2. Lack of Clarity & Transparency

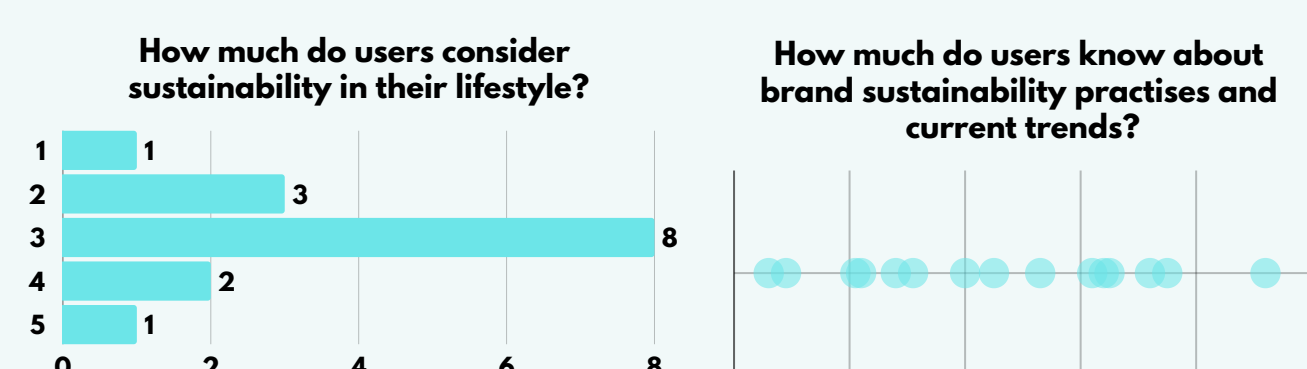
Especially around sustainability claims and quality. "It's always greenwashing. I don't really believe most clothes are sustainable, unless you're thrifting it." "Usually sustainability claims are vague or misleading." "If it feels heavier and stiffer, then I assume it's better quality."

! Magnifies Brand Loyalty as a Risk-Reduction Strategy

3. Convenience Overrides Sustainable Intent

"I just don't have the time as a college student. I still use Amazon because it's so convenient." "I want to shop sustainably, but it takes too long to find reliable information."

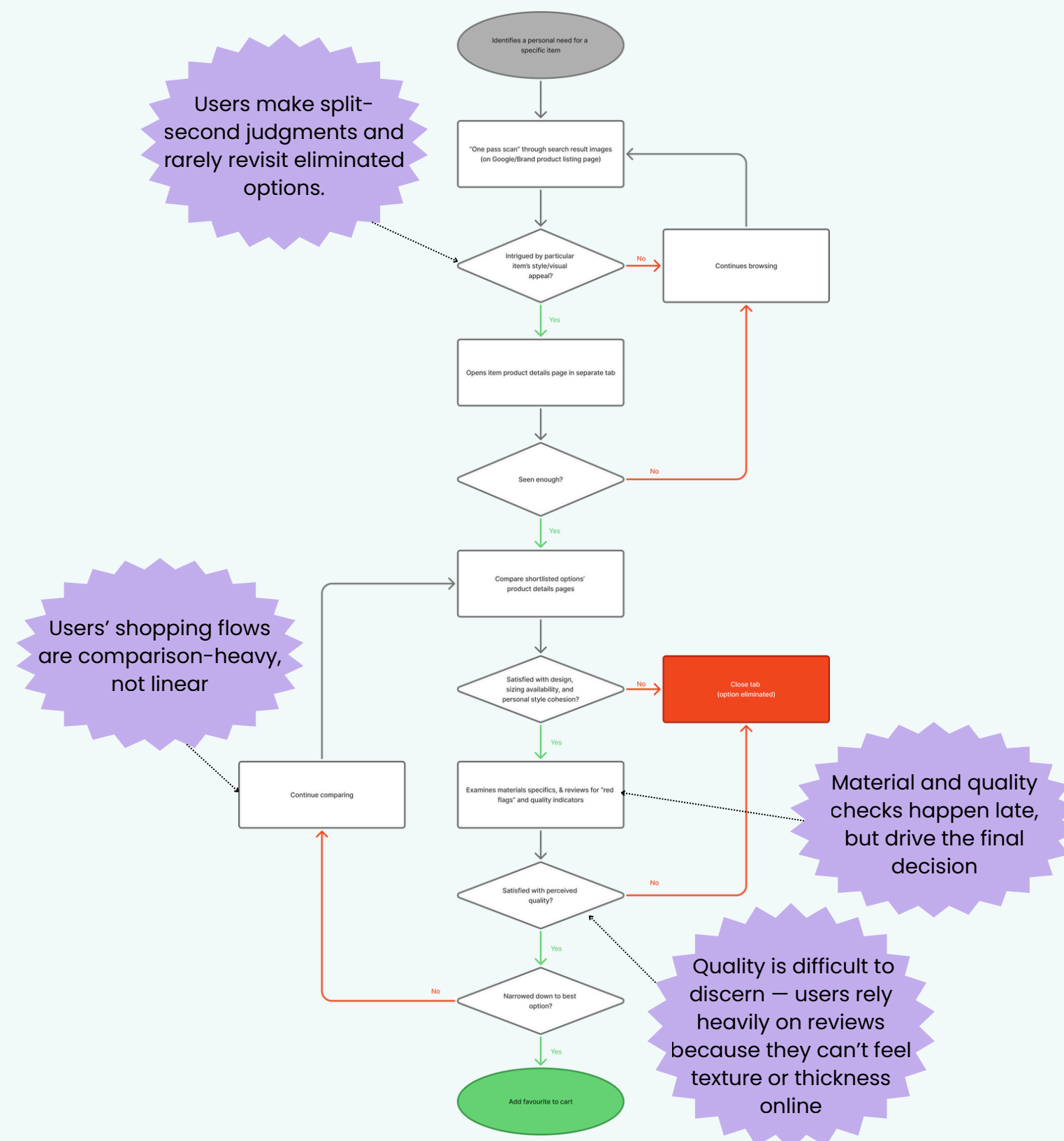
4. Wide Variation in Sustainability Consciousness & Knowledge



5 Think-aloud Studies → Friction Points

Goal: Reveal how people actually behave during online shopping.

Outcome: Validated our 4 core themes and exposed where the friction points are and exactly when Magnolia must intervene to be useful.



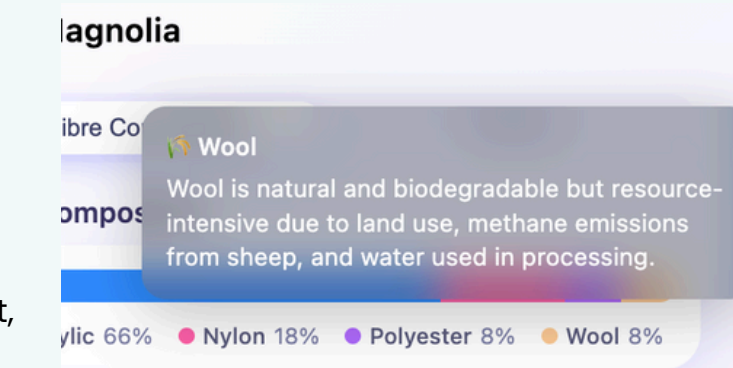
System Overview and Approach

Magnolia is a **light-weight shopping extension** that assists users in the online shopping process by accessibly providing users information on garment longevity that is otherwise difficult to find. It works by scraping the webpage for information on materials and reviews, and displaying simple and intuitive graphics on **fiber composition, durability, and care instructions**. It also provides users with **review summaries, insights** to keep in mind before buying, and information on the **brand's commitment to sustainability**. Users are **empowered to shop sustainably** by being equipped with the necessary knowledge to shop durably.

Material	Properties
organic cotton	Production uses non-genetically modified...
supima cotton	Supima cotton is exclusively grown in the U.S.
bed cotton	A BCI (Better Cotton Initiative) declaration...
cotton	Rules on heavy water usage and wastewater...
recycled polyester	Recycled polyester produces 75% less carbon...
polyester	Derived from fossil fuels and generates high...
acrylic	Derived from fossil fuels and generates high...
nylon	Nylon is petroleum based and generates high...
wool	Wool is natural and biodegradable but uses...
spandex	Petroleum-derived synthetic with a high ch...
elastane	Petroleum-derived synthetic with a high ch...

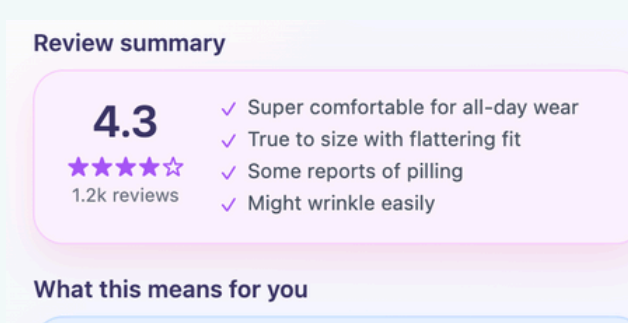
Fibre Database

Coded with information about fabric composition, environmental impact, pros and cons



Fibre Notes

Digestible descriptions of the environmental impact a fiber in the garment may have



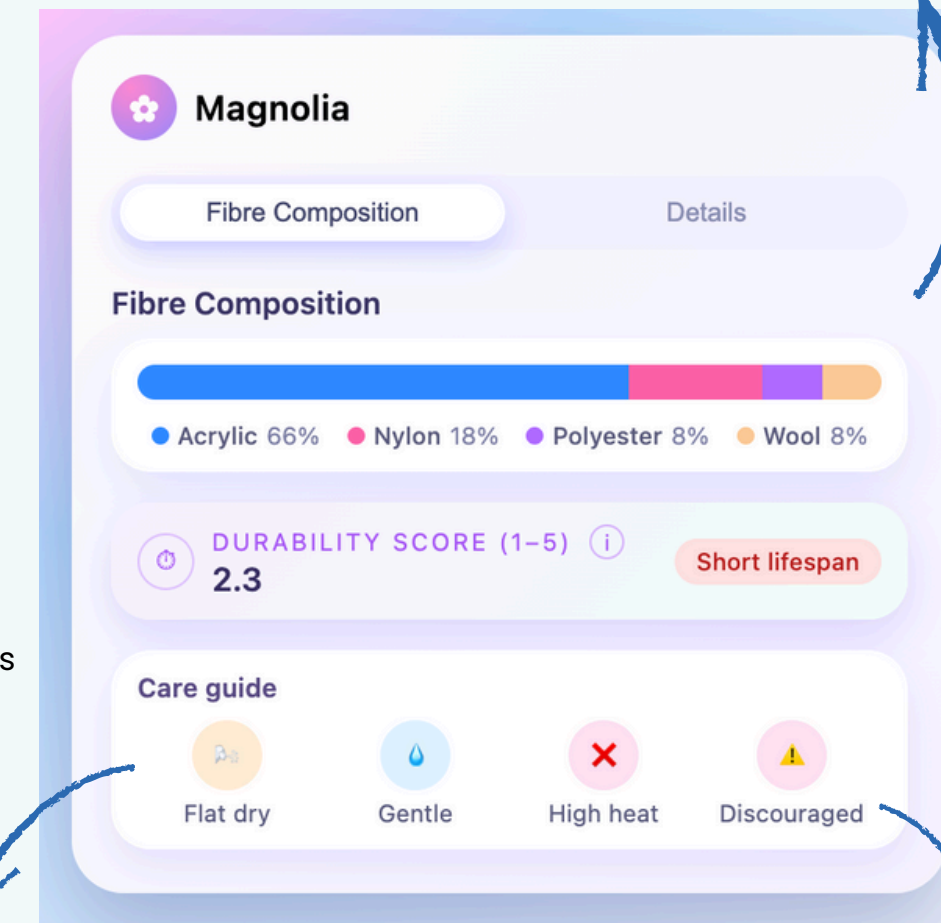
Review Summary

Users get social proof and quick summaries of reviews to quickly assess garment suitability



Brand sustainability

Quickly understand if a brand has pledged to any sustainability initiatives



Fibre Composition

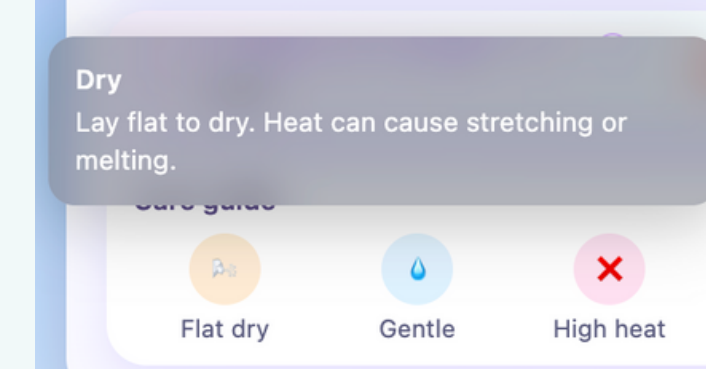
Visualizes fibre composition and highlights key features of each material

Durability Score

Weighted average of the main fibres in the garment

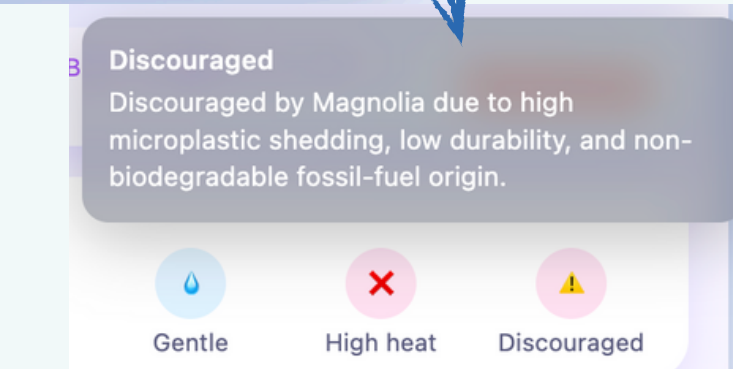
Care Guide

Quick, scannable way for users to see optimal washing instructions for product durability



Care Notes

Clear instructions and reasoning for how to take care of this garment



Recommend/Discouraged

A quick note on whether or not we recommend the garment, based on the materials

Scenarios and Design Goals

Key User Group & Scenario

18 - 30 Year Olds who shop online, and want to find **long-lasting, durable clothing**, and shop smarter **without the hassle of research and replacements**



Pain Points

Limited time and care to research materials, care and longevity; Large learning curve

Confusing "sustainability" claims and hard to judge durability before purchase

Goals

Reduce effort spent comparing options and quickly grasp details about clothing

Buy smarter with items that last, while avoiding waste and misleading marketing

Solution

Simple at a glance product summaries, metrics and visualizations. Additional detail about fibre durability, production and wash care.

Summarizes customer reviews, and clear material quality indicators. Displays brand sustainability pledges

Design Goals

1 Instant and Low Effort
Convenient, and surface clarity at the skim stage

2 Reduce Cognitive Load
Translate fiber compositions and user reviews to intuitive indicators

3 Comparison - Friendly
Integrate seamlessly into users' shopping flow when comparing items, reducing friction

4 Decision Supporting
Provide most impactful guidance at the final moment right before purchase

Evaluation and Future Direction

Pilot → Iteration → Usability Testing → Iteration → Validate Improvements (7 sessions overall)

What Went Well

From our usability testing, we were excited to see the following ratings for outcomes we were looking for:

Outcome	Score 1-5
Quick to learn	4.7
Confidence in use	4.3
Convenience in use	4.8
Future use	4.6
Value	4.1
Efficiency	4.4
Clarity	4.7

Clear Alignment with Design Goals

When asking users about how well the system satisfied different parts of our design goals, all users responded positively (Goals 1,2)

Directly Addresses 4 Core Themes

All users' user journeys suggested vast improvement in the 4 core themes. We were able to see users who did not consider environmental impact as a factor when shopping begin to evaluate the sustainability of a article of clothing using our system.

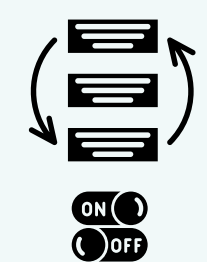
Integrates well into shopping flow

Users found it easy to navigate between our system and the clothing listing. They required little to no instructions and quickly adopted Magnolia into of their existing shopping process.

Moving Forward

Enable Customization

Users differed in which features they found most impactful, and engaged with different parts of the experience. Offering customization options, like rearranging modules, turning features on or off, would allow users to shape the experience around their priorities.



Increase scraping extensibility

Refine scraping pipelines to support a wider range of e-commerce sites and handle variations in page formats, making data ingestion more resilient.

Sharpen visual language

By refining visual indicators, we can make key information easier to spot and strengthen overall skimmability, especially in when users are comparing multiple options.

Expand fiber database

Users benefit from deeper, more accurate fiber insights. Expanding the database will increase coverage across niche fibers, blends, and alternative materials.