Zero-Waste Grocery Shopping App

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Brief

With growing concerns about **environmental impact**, consumers seek **eco-friendly shopping alternatives**, but most e-commerce platforms lack clear **sustainability indicators** and **incentives**. This project aims to design a **sustainability-focused e-commerce platform** that provides transparency on **product sustainability**, **rewards eco-conscious choices**, and **tracks product lifecycle**.

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01

DISCOVER

Domain **Introduction**

FMCG (fast moving consumer goods)

Fast-Moving Consumer Goods (FMCG) are **everyday products** like **food**, **beverages**, **personal care items**, and **household goods**. These products sell quickly and are produced in **large quantities**.

In recent years, sustainability has become a big focus in the FMCG industry. Many brands are trying to **reduce plastic waste**, **lower carbon emissions**, and use **eco-friendly packaging**. Consumers are also looking for **greener options**, which is pushing companies to **adopt better practices**.

Eco-Innovation: What's Trending?

Eco-Friendly Packaging

Sustainable packaging solutions reduce environmental impact through recyclable, **biodegradable materials**.

Transparent Supply Chains

Consumers prioritize ethical sourcing and transparent supply chains for fair labor and environmentally **friendly practices**.

Carbon Footprint Management

Businesses focus on carbon accounting to measure and reduce carbon **footprints effectively**.

Circular Economy Initiatives

Circular economy models like product resale, repair, and recycling extend product life and **reduce waste**.

Technological Innovations

AI and AR enhance personalized shopping experiences and improve **operational efficiency**.

Social Commerce and Consumer Behavior

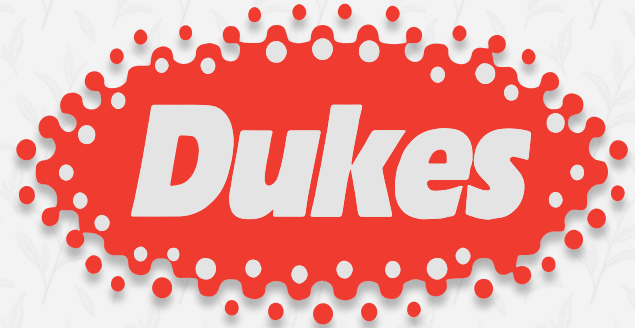Social media platforms make shopping easier but require balancing convenience with **sustainable consumption**.

Brand **Introduction**

Dukes India (1988)

Dukes India is a well-known **FMCG brand** in India, mainly recognized for its **biscuits**, **wafers**, **chocolates**, and **confectionery products**.
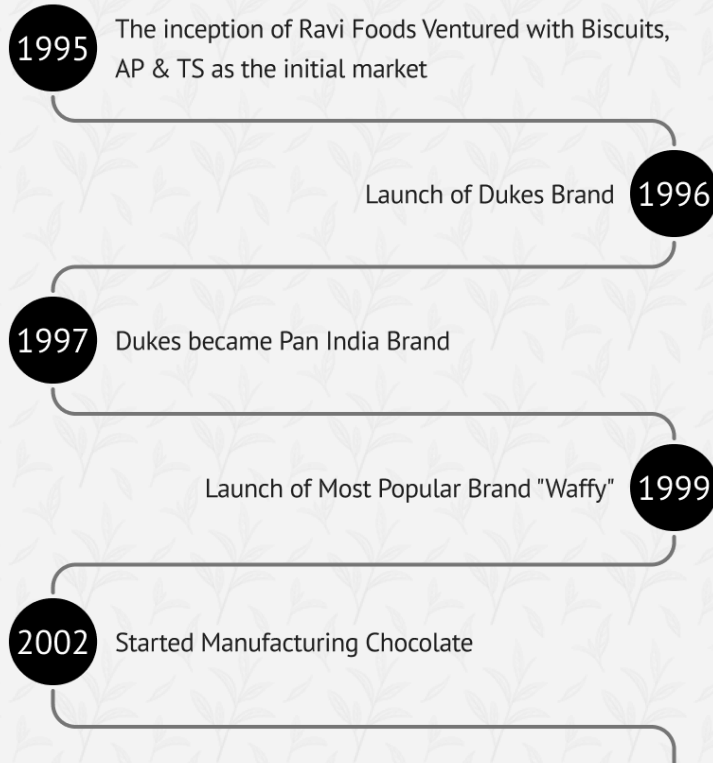The brand has been in the market for years and is popular for its wide range of **affordable** and **tasty snacks**.

Dukes focuses on **quality**, **taste**, and **affordability**, making it a trusted name among **Indian consumers**.

History **Dukes India**

1995 — The inception of Ravi Foods Ventured with Biscuits, AP & TS as the initial market

Launch of Dukes Brand — **1996**

1997 — Dukes became Pan India Brand

Launch of Most Popular Brand "Waffy" — **1999**

2002 — Started Manufacturing Chocolate

2004 — Started Manufacturing Confectionery

2011 — Apeda Export Awards (Outstanding Export Performance)

2013 — Market Leader in the Wafer category in MT

2017 — Recognized as World's 100 greatest brands and leader (Asia & GCC) by PwC

2021 — Expanding into new categories - Center Filled Chewing gum

2022 — Setting up of cracker line

2023 — Setting up of cake line

Market analysis

Dukes India (1988)

- The Indian **FMCG market** was valued at **$230.14 billion** in 2023, with a projected growth to **$1,288.50 billion** by 2030, showing a **27.9% CAGR**.

- **Dukes India** specializes in **biscuits**, **wafers**, **chocolates**, and **confectionery,** with biscuits contributing **50%** of its **$66** million **revenue in 2012**.

- Major **FMCG players** in India include **Britannia**, **Parle**, **ITC**, **Nestlé**, and **Mondelez (Cadbury)**.

- Key **market trends** include **premiumization**, a focus on **healthier snacks**, and the growth of **e-commerce**.

- **Challenges** in the sector include rising **commodity prices** and intense competition requiring constant **innovation**.

Dukes India

FY 2023–24 Highlights

- Dukes India increased its production capacity to **25,000 tonnes per annum**, aiming to meet growing market demand.

- Initiated the use of recyclable materials in packaging to **reduce** environmental impact.

- Focused on eradicating **hunger**, **poverty**, and **malnutrition** through various programs.

- Supported initiatives to improve **healthcare infrastructure** and **promote primary education** in underserved communities.

- Engaged in activities aimed at preserving **Indian art** and **culture**.

Competitor **Introduction**

Britannia

1

Leading brand in biscuits, cakes, and dairy products across India.

Parle

2

Popular for biscuits, snacks, and confectionery, widely loved in India.

ITC Sunfeast

3

Known for quality biscuits and cakes in the Indian market.

Nestlé

4

Global food company renowned for chocolates, confectionery, and beverages.

Mondelez

5

Famous for chocolates, biscuits (Oreo), and beverages like Bournvita.

SWOT (Britannia)

Strength

- Strong Global Brand.
- Wide Product Portfolio.
- Extensive Distribution Network.
- Digital marketing and e-commerce integration.

Weakness

- Over dependence on biscuit business.
- Limited global presence
- Dairy business struggles.

Opportunities

- Upcoming dairy products.
- Demanding healthier products.
- Enter foreign markets.
- Strengthen D2C channels

Threats

- Intense Competition
- Rising Raw Material Costs

BRITANNIA

SWOT (Parle)

Strength

- Market Leadership Iconic brands like Parle-G.
- Extensive distribution network.
- Affordable products.
- Strong brand loyalty.

Weakness

- Slow digital adoption.
- Limited focus on premium products.
- Dependence on Parle-G.
- Low innovation in new products.

Opportunities

- Rising demand for healthier products.
- Expanding e-commerce and D2C.
- Leverage social media marketing.
- Product diversification into snacks

Threats

- Intense Competition.
- Rising raw material costs.
- Shifting preference for premium and health-focused offerings

PARLE

Primary Research Questions

Personal Interview

- Do you usually check if a product is **eco-friendly** or **sustainable** before buying it? **Why or why not**?

- What kind of **sustainable practices** would you like to see in **brands** that sell **snacks and biscuits**?

- Would you prefer buying from a **brand** that is **transparent** about its **environmental efforts**?

- What would **encourage you** to choose a **sustainable product** over a **regular** one — **price**, **rewards**, **packaging**, or **something else**?

- If a **shopping app** showed how much **carbon footprint** your **purchases** generate, would that **affect your buying decisions**?

- Do you think features like **repair**, **reuse**, or **recycling tracking** can work for **snack product packaging**?

Primary Research Insights

Personal Interview

- Most users had **heard of sustainable products**, but only **few** have checked for **sustainability labels** when shopping. They felt it's still not **easy to identify** which **brands** are **eco-friendly**.

- All users **agreed** that they would **prefer to buy** from a **brand** that clearly shows their **sustainability efforts** like using **recycled packaging** or **reducing plastic use**.

- Many of the users said that **discounts**, **cashback**, or **eco-points** would make them more likely to choose a **greener option**, even if it **costs slightly more**.

- Most users brought up **concerns** about **plastic-heavy packaging** in **snacks**.

- Most people didn't think it made sense to track how **biscuits and wafers** are **reused**, **repaired**, or **recycled**. But they liked **simpler ideas**, like using **refillable containers** or **wrappers that can break down naturally**.

02

DEFINE

Bio:

An eco-conscious millennial who prefers sustainable products but struggles with unclear labels and limited eco-options on online platforms.

Goals:

- Shop responsibly with minimal environmental impact.
- Support genuinely sustainable brands.
- Track carbon footprint from online purchases.
- Reduce single-use plastic and packaging waste.

Frustrations/Pain Points:

- Difficulty verifying if a product is truly eco-friendly.
- Gets misled by greenwashing and marketing buzzwords.
- Lack of incentives or rewards for choosing sustainable products.
- No tracking of environmental impact post-purchase.

Tech Comfort Level:

Highly comfortable with tech,
Uses apps like **Amazon**, **Swiggy**, **Myntra**, and **Google Pay** daily.

Aditi Sharma

Age	: 27
Occupation	: IT Professional
Location	: Bangalore, India
Income	: ₹35,000/month
Lifestyle	: Urban, socially aware, health & eco-conscious

Says
- I try to choose eco-friendly products whenever possible.
- It's hard to know which brands are actually sustainable.
- I wish I got rewarded for making good choices.

Thinks
- Am I really making a difference by buying this?
- What if this is just marketing talk?
- Why don't platforms make sustainability more visible?

Does
- Researches eco-products online.
- Compares multiple brands before buying.
- Checks product reviews, ingredients, and packaging claims.

Feels
- Frustrated with vague or misleading product claims.
- Anxious about contributing to environmental harm unknowingly.
- Motivated but unsure if her efforts truly matter.

CJM (as is)

A user is trying to purchase eco-friendly snacks through an e-commerce platform and finding products that align with sustainable values.
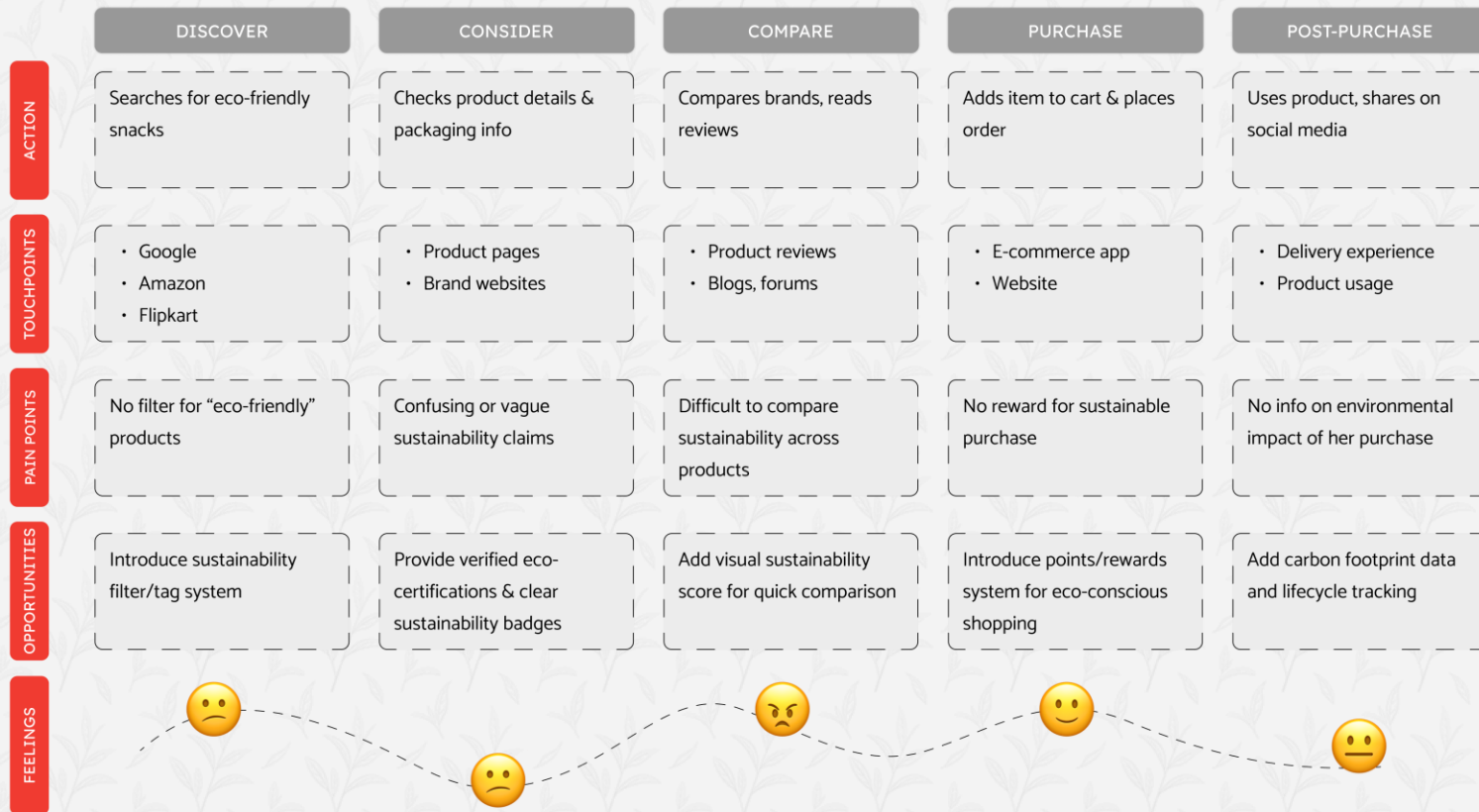
|	DISCOVER	CONSIDER	COMPARE	PURCHASE	POST-PURCHASE
ACTION	Searches for eco-friendly snacks	Checks product details & packaging info	Compares brands, reads reviews	Adds item to cart & places order	Uses product, shares on social media
TOUCHPOINTS	• Google • Amazon • Flipkart	• Product pages • Brand websites	• Product reviews • Blogs, forums	• E-commerce app • Website	• Delivery experience • Product usage
PAIN POINTS	No filter for "eco-friendly" products	Confusing or vague sustainability claims	Difficult to compare sustainability across products	No reward for sustainable purchase	No info on environmental impact of her purchase
OPPORTUNITIES	Introduce sustainability filter/tag system	Provide verified eco-certifications & clear sustainability badges	Add visual sustainability score for quick comparison	Introduce points/rewards system for eco-conscious shopping	Add carbon footprint data and lifecycle tracking
FEELINGS	🙁	☹️	😠	🙂	😐

Problem Statement

Modern **e-commerce platforms** lack **transparency** in **product sustainability**, making it difficult for users to identify genuinely **eco-friendly options**.
There is also **no motivation** or **reward system** that encourages users to adopt **sustainable shopping habits**, resulting in **low engagement** with **eco-conscious choices**.
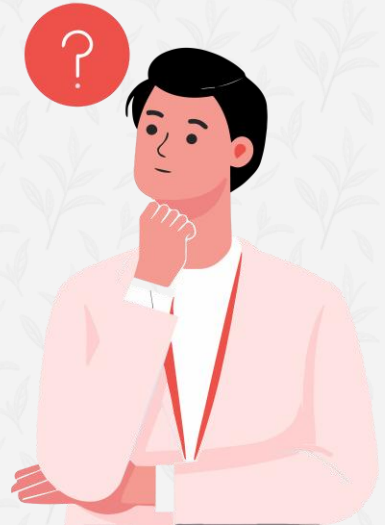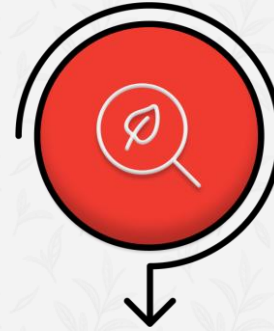
HMW **Statements**

How might we make it easier for users to identify truly sustainable products while shopping online?

How might we motivate and reward users for choosing environmentally responsible products?

How might we provide clear and trustworthy sustainability metrics during the shopping experience?

How might we help users track the environmental impact of their purchases post-delivery?

03

DREAM

Concept Directions

Sustainability Score Tagging

Description
Visual score based on eco-factors

Benefits
Easy understanding, visual appeal

Eco-Rewards System

Description
Earn points for choosing sustainable products

Benefits
Discounts, free delivery, donations

Carbon Impact Tracker

Description
Shows carbon footprint saved after purchase

Benefits
Shows carbon footprint saved

Product Lifecycle Assistant

Description
Tracks refill, reuse, recycling options

Benefits
Refill alerts, drop-off locations

Verified Sustainable Filter

Description
Filters for certified green products

Benefits
Transparency, easy discovery

Sustainability Journey Dashboard

Description
Personal dashboard to view total impact

Benefits
Tracks CO2 saved, waste reduced

Brainstorming

Sustainable Product Highlights
- "Eco Snack" badge for sustainably packaged items
- Icon indicators (e.g., Vegan, Palm-oil free,)
- Ingredients transparency with origin maps
- "Low Emission Product" tag based on transport logistics
- Highlight products with minimal artificial additives

Smart Purchase Experience
- "Refill Pack Available" tag under products
- "Eco Suggest" toggle to show only low-waste options
- Sorting by sustainability score
- Carbon footprint estimate per product
- Show "Pack Type: Recyclable/Non-recyclable" below image

Green Rewards by Dukes
- Free delivery vouchers for zero-waste delivery option
- Green Points for buying eco-labeled products
- Unlock digital coupons after consistent sustainable purchases
- Bonus points for selecting "bulk packs" (less packaging)
- Donate points to a local food donation cause

Post-Purchase Sustainability Support
- Sustainability dashboard (CO_2 saved, wrappers recycled)
- Reminders for bulk buying next time
- Tips for storing snacks in reusable containers
- Email series: "5 ways to reuse your Dukes pack"

Circular Lifestyle with Dukes
- QR codes on packs for creative upcycling ideas
- Earn coupons by uploading recycling proof
- Find local snack pack recycling bins
- Track how many wrappers you've saved from landfills
- Refill & reuse program for tins or boxes

Dukes Green Community
- Leaderboard of top green buyers
- Community posts: Snack reviews + eco tips
- User polls: "Which product should go plastic-free next?"
- Eco-badge for consistent green users
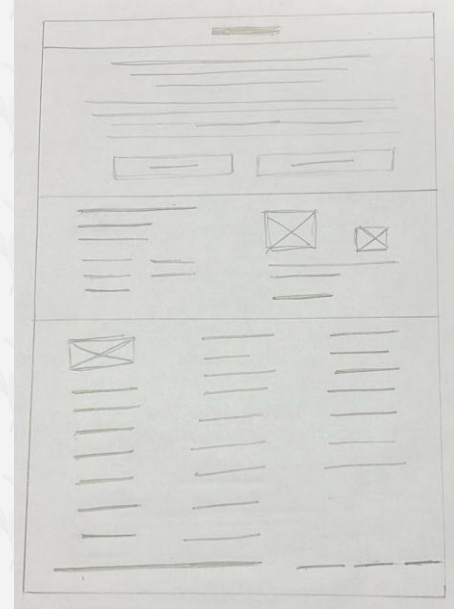- Campaigns like #SnackSustainably with Dukes

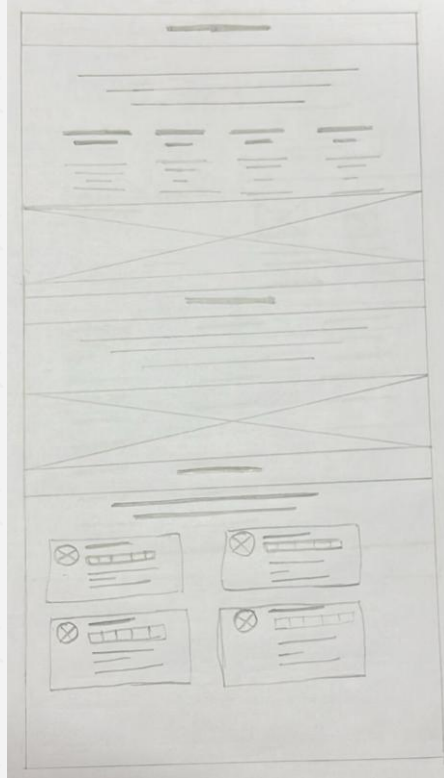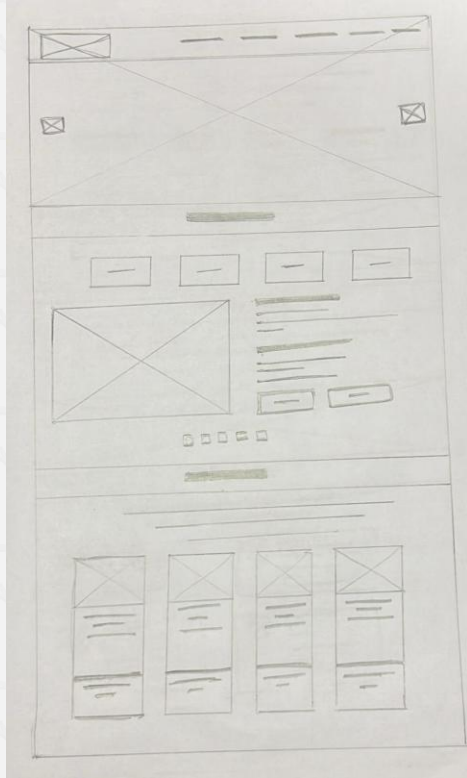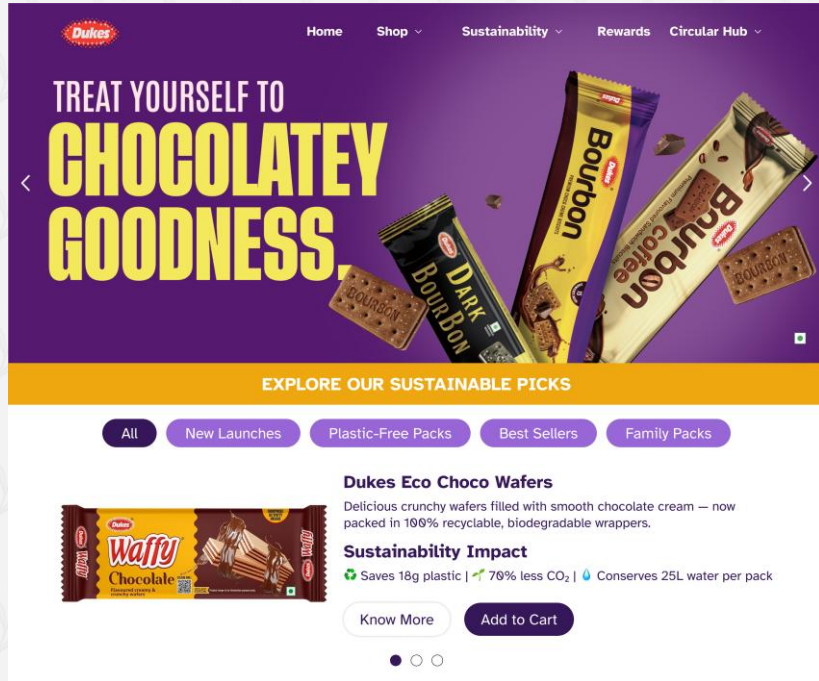# 04

DESIGN

Low-Fidelity Wireframes

High-Fidelity Wireframes

High-Fidelity Wireframes

DUKES GREEN REWARDS

Every sustainable purchase earns you Green Points. Redeem them for exciting discounts, exclusive offers, or even contribute to environmental causes — making your shopping habits count beyond the cart.

Earn on Every Order
Collect points for eco-friendly purchases and deliveries.

Redeem for Discounts
Use points for exclusive discounts and bundle offers.

Support Green Causes
Convert points into donations for environmental initiatives.

Track Your Impact
Monitor your environmental contributions and savings.

WHAT OUR ECO-SHOPPERS SAY

From better taste to a better planet — here's what our community says about shopping sustainably with Dukes.

Rhea M.
★★★★★
I love how easy it is to see a product's eco-score. Makes guilt-free snacking real!

Nikhil S.
★★★★★
The green rewards program actually motivated me to recycle more. Great initiative!

Ananya R.
★★★★★
Clean ingredients, no plastic guilt, and I earn points? Dukes nailed it.

Aarav J.
★★★★★
I never thought snacking could feel this responsible. "Dukes makes going green so effortless.

OUR PROMISE TO THE PLANET

We're more than a snack brand — we're a movement towards mindful consumption.
At Dukes, we're committed to reducing our environmental footprint through recyclable packaging, conscious sourcing, and customer empowerment. Every step we take is a promise to make tomorrow greener — one bite at a time.

Explore Our Eco-Journey   Start Shopping Consciously

Want to see how far we've come in building a greener tomorrow?

2023 Sustainability Report →   2020 Sustainability Report →
2022 Sustainability Report →   2019 Sustainability Report →
2021 Sustainability Report →

"Sustainability is not a trend for us — it's a responsibility. Every choice we make is towards a cleaner, greener India."

Dukes India Sustainability Team

Dukes

Company
Careers
Events
Blogs
Investor Relations
Contact us

Quick Links
Home
About Us
Shop
Green Rewards
How It Works
Sustainability Journey
FAQs

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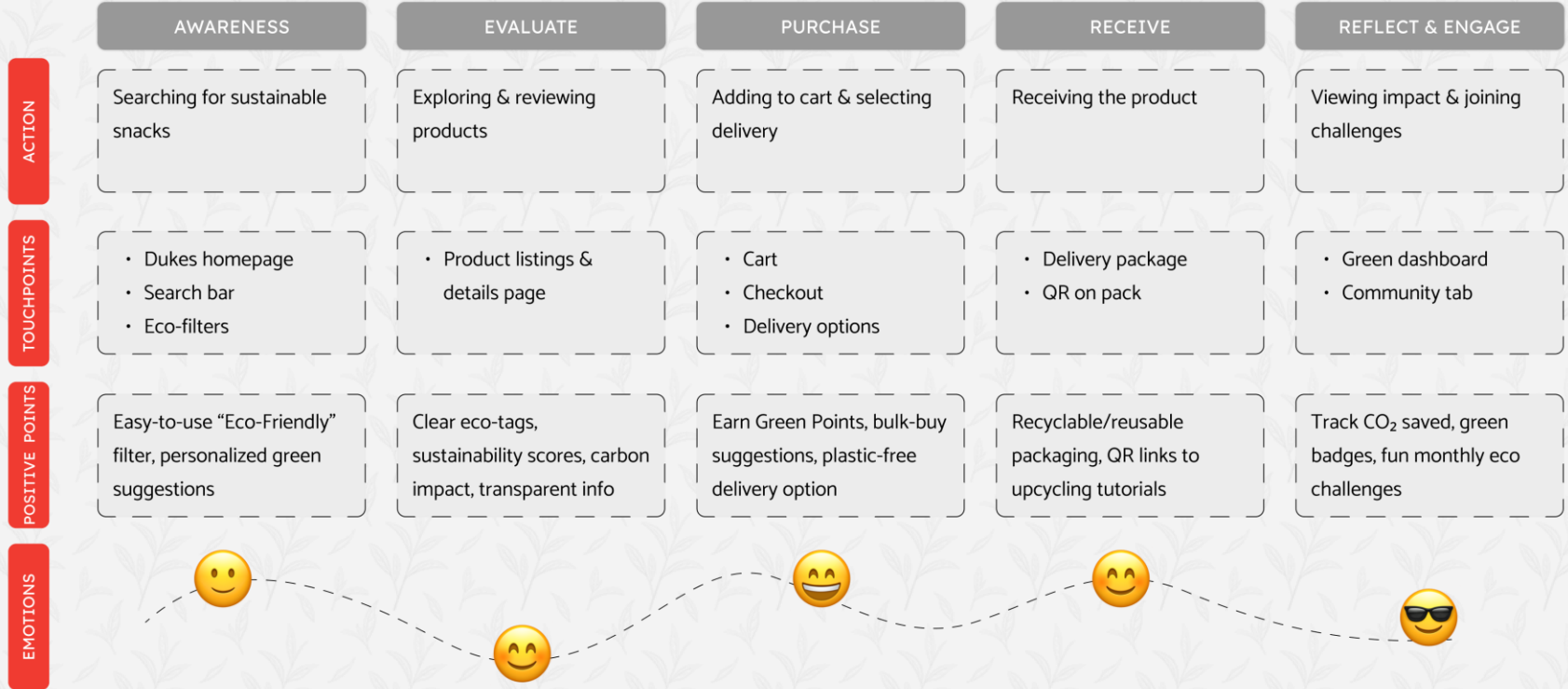
CJM (to be)

A student buys from Dukes' eco-friendly line, chooses plastic-free delivery, tracks carbon savings, and joins eco-challenges.

	AWARENESS	EVALUATE	PURCHASE	RECEIVE	REFLECT & ENGAGE
ACTION	Searching for sustainable snacks	Exploring & reviewing products	Adding to cart & selecting delivery	Receiving the product	Viewing impact & joining challenges
TOUCHPOINTS	• Dukes homepage • Search bar • Eco-filters	• Product listings & details page	• Cart • Checkout • Delivery options	• Delivery package • QR on pack	• Green dashboard • Community tab
POSITIVE POINTS	Easy-to-use "Eco-Friendly" filter, personalized green suggestions	Clear eco-tags, sustainability scores, carbon impact, transparent info	Earn Green Points, bulk-buy suggestions, plastic-free delivery option	Recyclable/reusable packaging, QR links to upcycling tutorials	Track CO_2 saved, green badges, fun monthly eco challenges
EMOTIONS	🙂	😊	😄	😊	😎

Conclusion

This project aimed to bridge the gap between **sustainability** and **user-centric design** by creating a **platform** that empowers users to make **eco-friendly shopping choices**. Through strategic **UX research**, **competitor analysis**, and **user-driven insights**, Crafted a solution that not only promotes **responsible consumption** but also aligns with the **brand's vision**.

The final outcome demonstrates how **thoughtful design** can drive **behavioral change**, enhance **brand value**, and contribute to a **greener future**. With the proposed **features** and **sustainable touchpoints**, this **e-commerce solution** for **Dukes India** lays the foundation for a **smarter**, **cleaner**, and more **conscious** way to shop.

Thank you