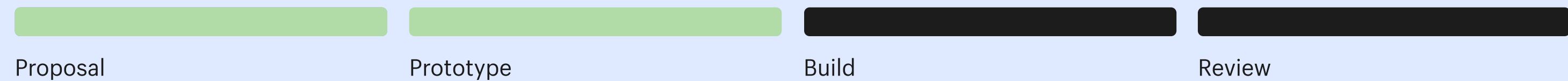




Carbon Commerce Marketplace

Blockchain-Powered Carbon Credits on Shopify

Project Status



Project summary

Overall goal: Integrate blockchain technology into the Shopify platform to enable tracking and trading of carbon credits.

Timeline

START DATE

Feb 22 2025

PROPOSED LAUNCH DATE

July 1st 2025

Links

 [#carbon-commerce](#)

 [Coming soon](#)

 [Link here](#)

Team

PROJECT OWNER

Ana Castro

We are building a decentralized marketplace within Shopify that leverages blockchain technology to enhance trust in carbon credit transactions, ensuring a transparent and secure carbon credit market.

This means customers get clear tracking of tokens, helping everyone make smarter, greener choices with confidence.

INTRODUCTION

What Are Carbon Credits?

Carbon credits are tradable permits that allow the holder to emit a certain amount of carbon dioxide or other greenhouse gases. One credit typically equals one ton of carbon dioxide.

Regulation and Adoption

Regulated through international agreements like the Kyoto Protocol and the Paris Agreement.
Countries with active carbon markets include the EU, China, Australia, and Canada, each with specific compliance standards.

Emerging Trends

Growing integration with blockchain technology for transparency and traceability.
Increasing corporate commitment towards sustainability is driving demand for high-quality carbon credits.

Industry Risks

Fraud: Instances of double-counting and selling invalid credits can occur, undermining market trust.
Lack of Transparency: Variability in certification and standards can lead to confusion and reliance on thorough vetting processes.

Challenges

Navigating complex regulatory environments and understanding varied standards can be daunting for businesses.

Ensuring project quality and genuine environmental impact remains a key concern.

Carbon Credit Market Size And Growth Rate

The carbon credit market size has grown exponentially in recent years.

The projected compound annual growth rate (CAGR) of the market from 2025 to 2028 is approximately 30.1%.

2024
526.32 billion USD

2025
694.62 billion USD

2028
1602.7 billion USD

Target Audiences

Carbon Credit Partners

Characteristics: Organizations specializing in carbon credit generation through reforestation, carbon capture, and sustainable tech, aiming to expand market reach and streamline sales.

Motivation: Expand market access and enhance sales channels for carbon credits to a broader audience, ranging from large corporations to smaller eco-conscious entities.

Pain Points: Navigating complex carbon markets, inventory management, and reaching the right buyers efficiently; managing integrations with technology and systems for scalability.

Interests: Partnering with platforms that simplify sales transactions, accessing a global market, leveraging cutting-edge technology for better storytelling and engagement, and the ability to manage complex inventories seamlessly.

Shopify Merchants

Characteristics: Business owners using Shopify, from startups to established brands, increasingly focused on sustainability.

Motivation: Enhance brand reputation by being transparent about sustainability efforts; meet growing consumer demand for eco-friendly practices.

Pain Points: Difficulty in tracking and proving the credibility of carbon offsets; lack of streamlined tools for integrating sustainability into business operations.

Interests: Business growth, innovation, sustainability initiatives, and leveraging technology to streamline operations.

Eco-Conscious Consumers

Characteristics: Consumers seeking transparency and supporting brands committed to sustainability.

Motivation: Make purchases that align with their values of environmental responsibility and personal impact on the planet.

Pain Points: Distrust of brands' environmental claims due to a lack of transparency; difficulty in identifying genuinely sustainable products.

Interests: Sustainable living, ethical consumption, environmental advocacy, and staying informed about green technologies.

Competitor Analysis

Toucan Protocol	KlimaDao	ClimateTrade
Strengths: • Tokenization of Credits: Provides transparency and immutability, building trust and ensuring authenticity of carbon projects. • DeFi Integration: Enhances liquidity with innovative financial mechanisms, attracting diverse participants. • Open Ecosystem: Fosters collaboration and innovation by encouraging third-party development. Weaknesses: • Technical Complexity: Can be challenging for non-technical users, requiring blockchain and DeFi familiarity. • Scalability Concerns: Rapid adoption might strain blockchain capabilities, impacting performance. • Regulatory Risks: Navigating evolving legal landscapes could pose uncertainties.	Strengths: • Community-Driven: DAO governance allows for inclusive decision-making, enhancing user engagement. • Incentive Mechanisms: Increases carbon credit value, appealing to environmentally conscious investors. • Strong Branding: Effectively engages users in climate action through financial participation. (Also uses DeFi) Weaknesses: • Token Price Volatility: Reliance on tokenomics introduces price instability, deterring risk-averse users. • Dependence on Crypto Markets: Vulnerability to market downturns affects stability. • Complex User Experience: May alienate users unfamiliar with crypto and decentralized finance.	Strengths: • User-Friendly Platform: Simplifies carbon offset transactions, making it accessible to a broader audience. • Established Partnerships: Enhances credibility with collaborations across various sectors. • Focus on Transparency: Builds trust through clear and straightforward transactions. Weaknesses: • Lack of Innovation: Comparatively less technologically advanced, potentially limiting appeal. • Integration Limitations: Restricted e-commerce connectivity could limit adoption opportunities. • Scalability Issues: Existing infrastructure may struggle with rapid growth demands.

KEY FINDINGS

Insights and Market Analysis

Our edge comes from combining Shopify's extensive merchant network with Shopify's robust e-commerce infrastructure to build a seamlessly integrated, blockchain-powered carbon credit tracking and trading platform.

This solution not only enhances transparency and trust in carbon transactions but also empowers businesses to easily incorporate sustainability into their operations. We provide merchants with user-friendly tools to showcase their environmental commitments, connect with eco-conscious consumers, and effectively participate in the rapidly growing carbon credit market.

Rapid Market Growth: The carbon credit market is set to expand from \$694.62 billion in 2025 to \$1,602.7 billion in 2028, reflecting a CAGR of approximately 30.1%. This growth is driven by increasing regulatory requirements and consumer demand for sustainable practices.

Consumer Demand for Transparency: Over 70% of consumers prefer brands that show a clear commitment to sustainability. Our tool addresses this need by making carbon credit transactions transparent through blockchain, thereby enhancing consumer trust.

Competitor Shortcomings: While competitors offer blockchain solutions, many lack seamless integration with existing e-commerce platforms. Our approach uniquely leverages Shopify's infrastructure, simplifying adoption for merchants.

Strategic Positioning: By aligning sustainability with business growth, we provide a competitive advantage to Shopify merchants, helping them attract eco-conscious customers and meet evolving market demands.

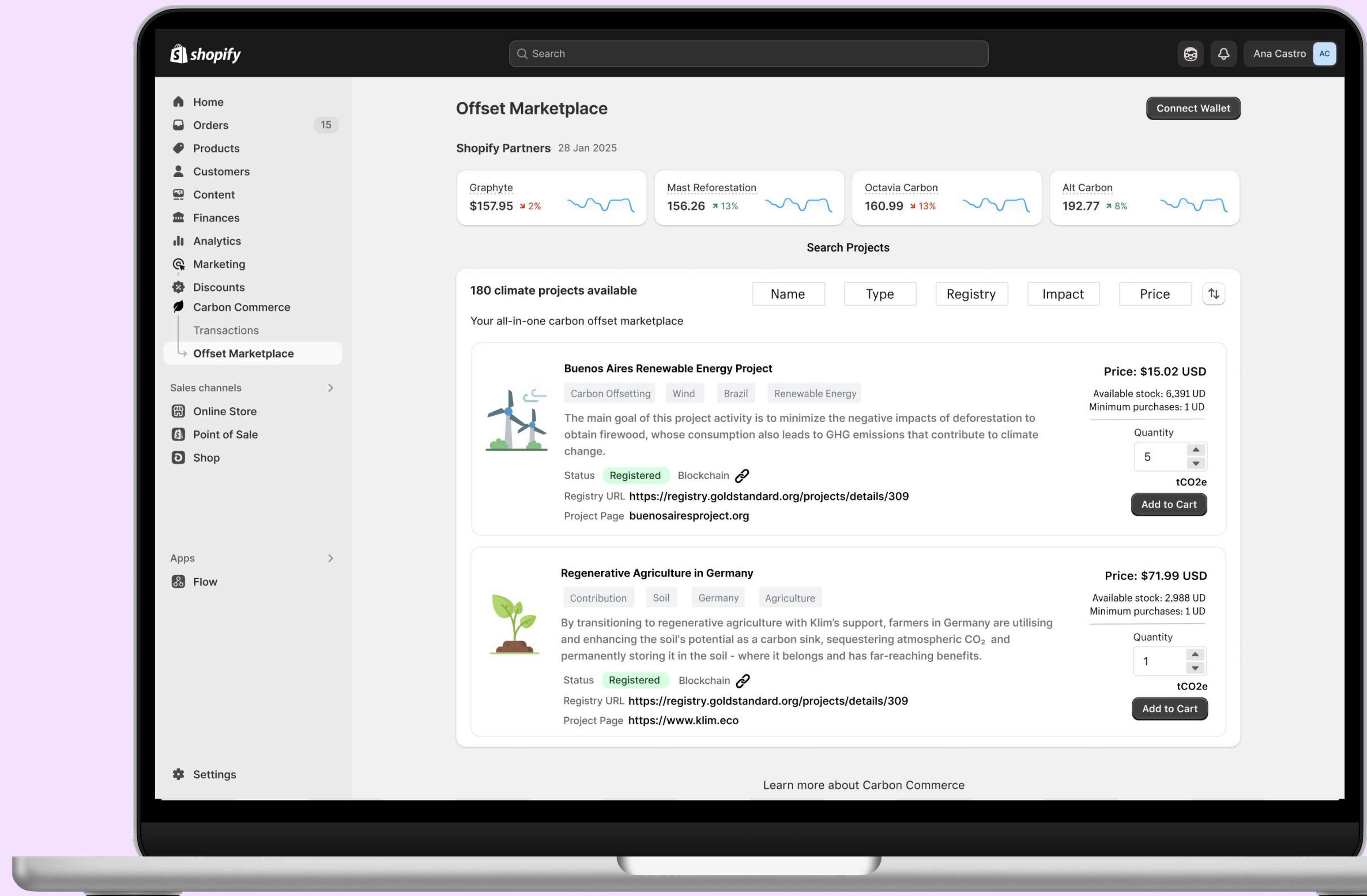
Commitment to Project Quality: By ensuring rigorous quality standards and continuous improvement, our platform guarantees reliable performance and exceptional user experiences, thereby strengthening merchant and consumer confidence.

Carbon Commerce Marketplace

Designed for Merchants

- **Discover and Select Projects:** Allow merchants to easily search and filter carbon offset projects to find those that align with their sustainability objectives.
- **Evaluate Project Impact:** Provide detailed project information to help merchants understand the environmental impact and benefits of each offset option.
- **Facilitate Seamless Purchasing:** Enable a straightforward checkout process, allowing merchants to quickly purchase credits and integrate them into their sustainability strategies.

The objective is to simplify participation in carbon offset programs, allowing merchants to showcase sustainability commitments and attract eco-conscious consumers, while scaling environmental efforts and embedding sustainability into operations.

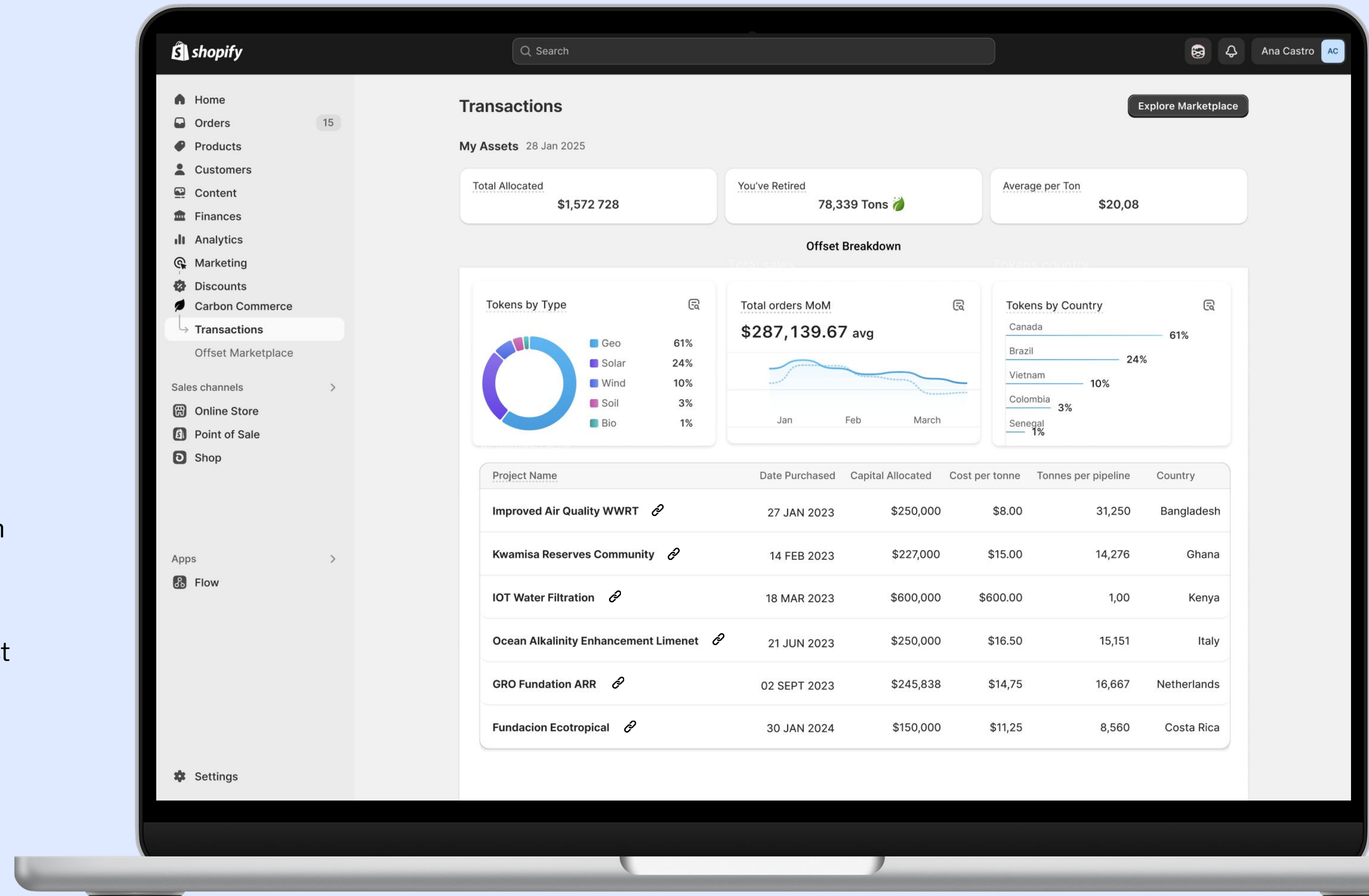


Carbon Commerce Transactions

Designed for Merchants

- **Track Carbon Credit Investments:** Provide comprehensive analytics and real-time updates to help merchants monitor their carbon credit purchases and evaluate returns.
- **Gain Insights into Environmental Impact:** Display metrics that show the direct impact of their carbon credit investments on reducing emissions.
- **Customize Dashboard Views:** Allow merchants to tailor dashboard settings to prioritize the data most relevant to their business goals and sustainability efforts.

This helps merchants manage their carbon initiatives ensuring they align with sustainability goals and make data-informed decisions in their environmental strategies.



Consumer facing blockchain feature Shop app

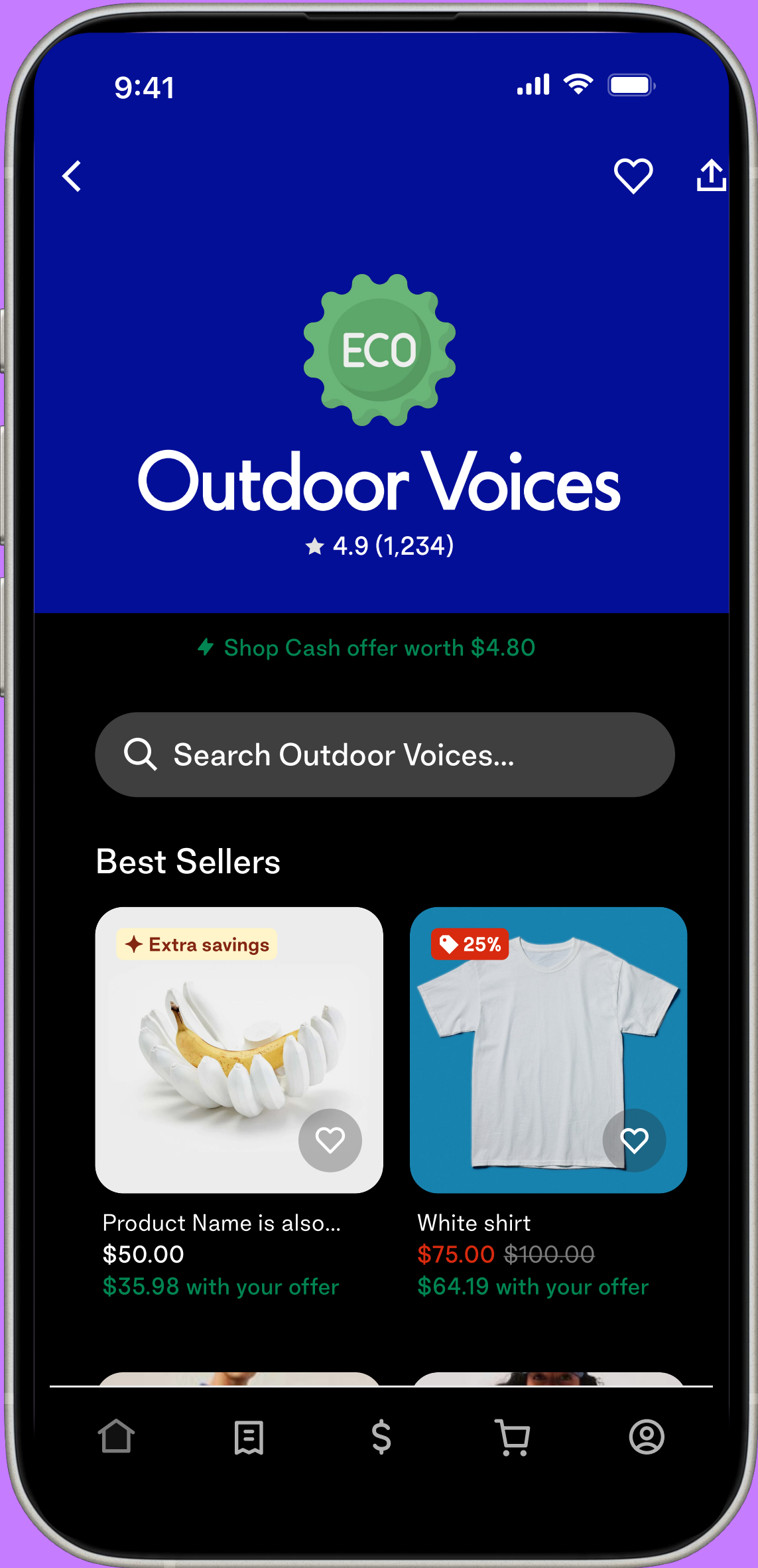
Designed for Merchants:

- **Verified Impact Display:** Eco Badge—Allows merchants to display blockchain-verified certifications and badges on their storefronts.

Designed for Consumers:

- **Verify Sustainability Claims:** Consumers can click through these badges to view transaction records and verification details on the blockchain, ensuring authenticity.

The objective is to build a trusted community of Shopify merchants and consumers committed to sustainability by providing consumers with easy access to verify the authenticity of a merchant's environmental efforts, enabling informed purchasing decisions.



Let's align!



Let's dive into the product requirements. These are split by category.

Carbon Offset/Credit Marketplace

Requirement	User Story	Priority	Notes
Ability to Search Projects	As a user, I want to search and filter carbon offset projects by type, registry, impact, and price to easily find what's relevant to me.	High	Enhances user navigation
Project Details and Transparency	As a consumer, I want detailed information, including project status, registry links, and expected impact, to ensure informed decision-making.	High	Click project to open Shopify store
Project Impact Metrics	As a user, I want to see quantitative impact metrics to evaluate the effectiveness of each carbon offset project.	Normal	Also on project page
Seamless Purchase Process	As a merchant, I want a user-friendly checkout process to purchase carbon credits efficiently and support sustainability goals.	High	Simplifies merchant engagement
Integration with Wallets	As a user, I need integration with digital wallets for secure and easy transactions.	High	Facilitates smooth transactions

Transactions Dashboard

Requirement	User Story	Priority	Notes
Comprehensive Transaction Analytics	As a store owner, I want to view analytics on my carbon credit transactions to track investment performance and carbon offset progress.	High	Supports data-driven insights
View and Export Transaction History	As a user, I need the ability to view and export my past transactions for record-keeping and reporting purposes.	High	Ensures transparency
Dashboard Customization	As a user, I want to customize my dashboard to prioritize the metrics most important to my business and sustainability strategy.	Normal	Enhances user experience
Real-Time Updates	As a user, I want real-time updates on transaction statuses to stay informed about my carbon offset contributions.	High	Increases responsiveness
Cost and Savings Tracking	As a user, I need to track the cost and potential savings of my carbon offsets to assess financial and environmental benefits.	Normal	Aids in financial planning

Eco Badge in Merchant's Store

Requirement	User Story	Priority	Notes
Display Eco-Badge	As a merchant, I want an eco-badge prominently displayed on my store to signal my commitment to sustainability and attract eco-conscious customers.	High	Increases consumer trust
Badge Customization Options	As a merchant, I want to customize the eco-badge's appearance to align with my brand's identity while maintaining its integrity.	Normal	Allows brand consistency
Badge Interaction and Information	As a consumer, I want to interact with the eco-badge to access information about the merchant's carbon offset efforts and supported projects.	High	Enhances transparency and engagement
Real-Time Badge Status Updates	As a merchant, I need the badge to reflect current sustainability achievements in real-time to ensure accurate public representation.	Normal	Ensures up-to-date information
Consumer Feedback Mechanism	As a consumer, I want to provide feedback on the sustainability efforts displayed through the badge to encourage continuous improvement.	Normal	Facilitates engagement and improvement

Launch Beta Version Initiate the beta release of the carbon credit marketplace (includes only partners) & basic transactions dashboard for select Shopify merchants, eco-badge feature will be released in Q4. Gather initial feedback and performance data to refine features. Begin partnerships with key carbon offset projects to ensure a robust and credible offering.	Full Product Launch Officially launch the full version of the platform for all Shopify merchants (Marketplace still only includes partners). Implement enhancements from the beta phase, including greater integration with digital wallets and optimized dashboard functionality. Conduct marketing efforts to increase awareness and attract early adopters.	Marketplace Expansion Expand the carbon credit marketplace by onboarding additional high-quality projects. Introduce advanced analytics tools in the transactions dashboard to offer deeper business insights. Facilitate workshops/webinars to educate merchants on maximizing their sustainability impact.	Consumer Engagement Enhancement Launch interactive features for consumers: clickable eco-badges with detailed merchant sustainability records. Leverage blockchain for real-time updates and project quality verification, increasing transparency and consumer trust. Analyze data on consumer engagement to plan further product developments.
Q1 2025	Q2 2025	Q3 2025	Q4 2025



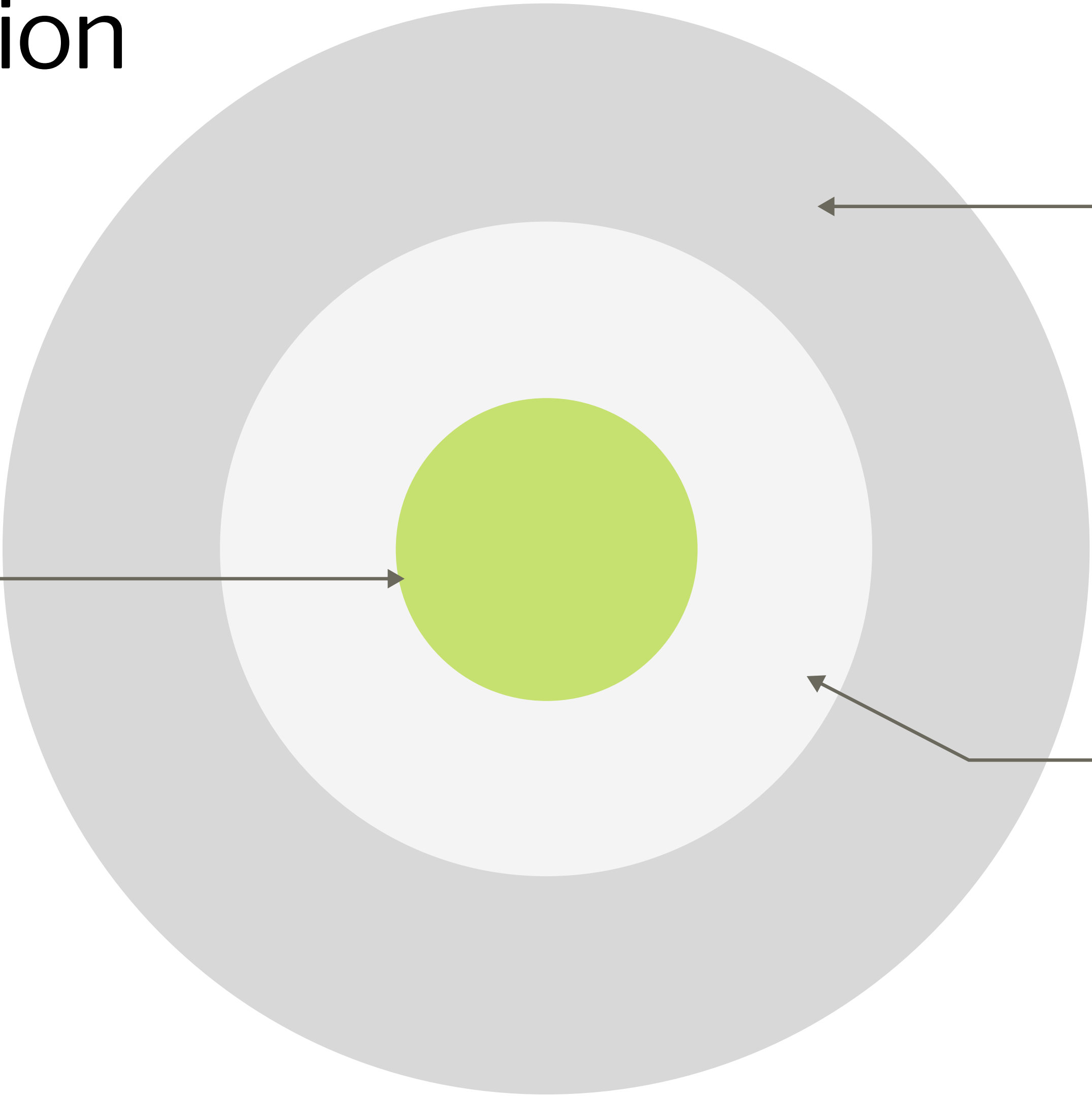
Go-To-Market Strategy

TARGET AUDIENCE

Market Penetration and Growth

Serviceable Obtainable Market

Aiming to capture 5% of Shopify's market, targeting around 87,500 merchants in the first year



Total addressable market

Estimated at 1.75 million merchants worldwide

Serviceable Available Market

If 20% actively seek sustainability solutions, the SAM would be around 350,000 businesses.

1 Launch Channels & Marketing Strategy

- **Collaborative Marketing:**

- Partner with sustainability influencers and Shopify Plus partners to endorse the platform
- Engage in co-marketing efforts with aligned eco-friendly brands within Shopify's network.

- **Targeted Advertising:**



- Use targeted social media and Google Ads campaigns to reach environmentally-conscious Shopify merchants.
- Focus on pain points like sustainability challenges and showcase the platform as a seamless solution.

- **Content Marketing & Case Studies:**

- Develop a series of blog posts, whitepapers, and videos that highlight successful sustainability transformations by partnering merchants.
- Leverage these stories as testimonials to demonstrate real-world value and effectiveness.

2 Launch Strategy

- **Shopify App Integration**

- Ensure the platform is prominently featured in the Shopify App Store with detailed descriptions, screenshots, and user reviews to attract merchants.

- **Launch Plan:**

- **Beta Launch in Q1 2025:** Engage select merchants to test and refine the platform based on feedback.
- **Full Product Launch in Q2 2025:** Expand availability to all Shopify merchants, supported by a robust marketing campaign.

- **Content Marketing & Case Studies:**

- Develop a series of blog posts, white-papers, and videos that highlight successful sustainability transformations by partnering merchants.
- Leverage these stories as testimonials to demonstrate real-world value and effectiveness.

3 Customer Support & Feedback

- **Post-launch Plan:**

- Continue refinement based on user feedback and introduce new features in response to market needs.
- Provide dedicated support and establish feedback loops to address merchant needs and enhance the product based on real-world use cases.
- Implement a help centre with resources and FAQs to guide users.

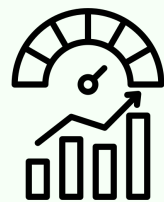


4 Metrics

- **Acquisition:** Track the effectiveness of marketing efforts and lead acquisition strategies.
 - CTR on campaigns
 - New leads generated
- **Consideration:** Measure how well potential customers are interacting with educational content and personalized outreach.
 - Email open rates
 - Webinar/content engagement
- **Evaluation:** Assess the conversion of interested prospects into paying users and gather qualitative feedback.
 - Interest-to-purchase conversion
 - Positive demo feedback
- **Purchase:** Determine the efficiency of the sales process and the value realized from transactions.
 - Purchase conversion rate
 - Average order value
- **Activation:** Ensure new users are effectively onboarded and actively engaging with the platform.
 - Time to first purchase
 - Platform activation rate
- **Retention & Growth:** Monitor long-term engagement, satisfaction, and growth in platform use to drive continuous improvement.
 - Merchant retention rate
 - Net Promoter Score (NPS)
 - Carbon credit transactions processed

5 Success Criteria KPI's

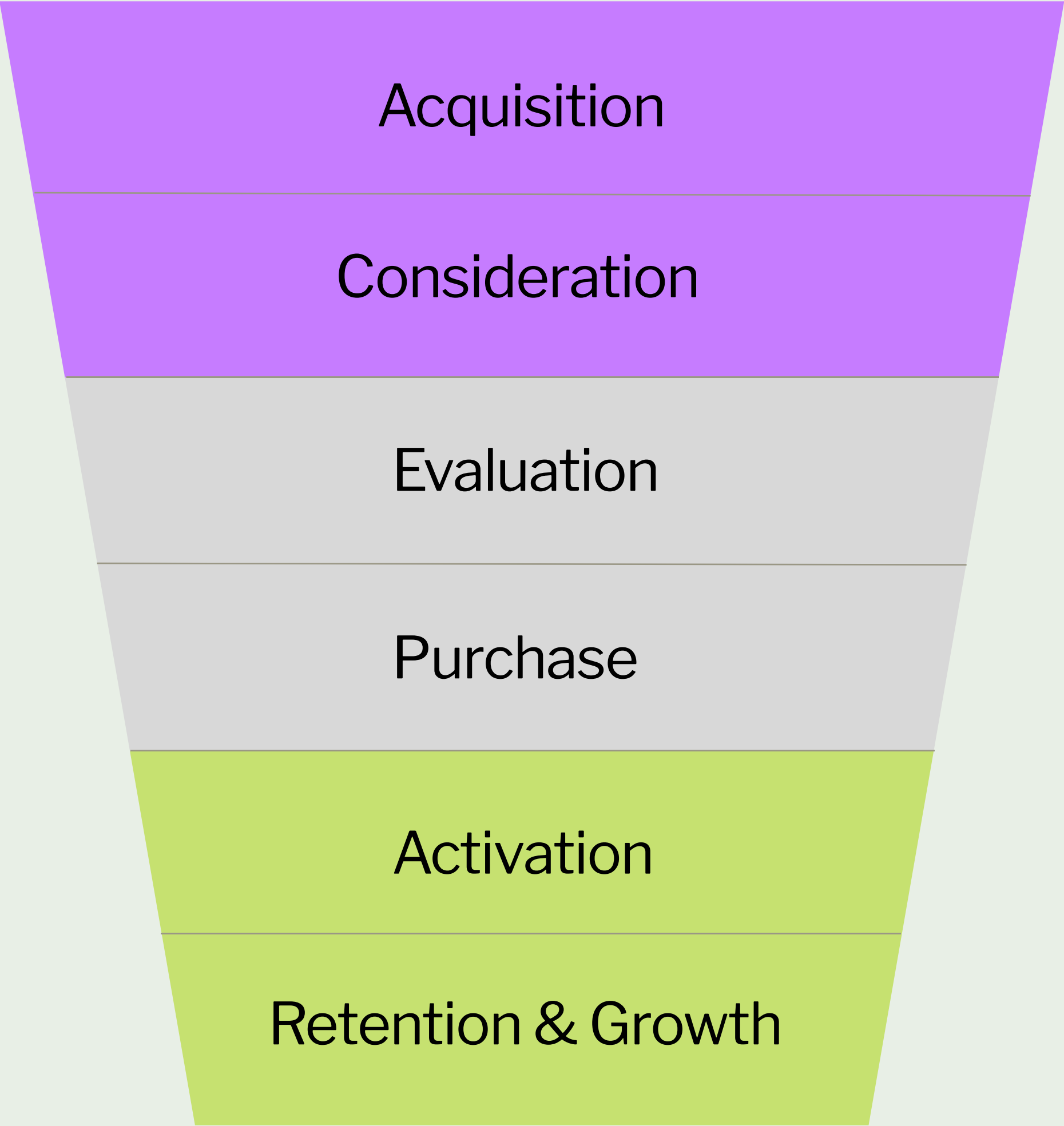
- **Merchant Adoption:** Achieving the target number of merchants using the platform within the first year.
- **User Engagement:** High engagement rates with platform features like carbon credit transactions and eco-badge interactions.
- **Revenue Targets:** Meeting set revenue goals from transaction fees.
- **Customer Satisfaction:** Aiming for an NPS above industry average indicating strong user satisfaction and likelihood to recommend.



6 Lessons & Next Steps

- **Lessons:**
 - **Gather Insights:** Regularly analyze feedback from early adopters and monitor performance data to understand what works and what needs improvement.
 - **Adapt Strategies:** Be open to changing tactics based on real-world results, ensuring alignment with user needs and market demands.
- **Next Steps:**
 - **Iterative Development:** Use insights from the launch phase to refine and expand platform features, focusing on usability and additional integrations.
 - **Market Expansion:** Explore opportunities to scale beyond Shopify's ecosystem or enter new geographic markets.
 - **Long-term Partnerships:** Strengthen relationships with carbon credit suppliers and establish new collaborations to enhance marketplace offerings.

GTM FUNNEL



Goal	Action	Metric
Marketing Generate leads	• Partner with sustainability influencers • Launch targeted campaigns • Personalized emails with merchants • Curated content for Shopify’s forums & communities	• Click-through rate (CTR) on campaigns • Open and click-through rates on emails • Number of new leads generated from events
Sales Close customers	• Offer initial setup support & demos to merchants • Share testimonials and success stories focused on ROI and sustainability impact. • Promote and facilitate carbon credit transactions	• Conversion rate from interest to purchase • Purchase conversion rate • Average order value
Success Retain & grow	• Provide comprehensive support to ensure successful platform use • Gather ongoing feedback for iterative product improvements • Regularly communicate new features and updates to keep engagement high	• Time to first carbon credit purchase • Platform activation rate • Merchant retention rate • Net Promoter Score (NPS) • Number of carbon credit transactions processed

NEXT STEPS



Product Optimization

FEB 2025

CAPSTONE

“I'd love to connect and see about brokering some credits through your platform.”

from Survey

“Cool idea! Love that you're integrating what we've been building into your project. I like how you have a bunch of different elements marketplace, dashboard, and shop integration”

Mitchel Selby,
Senior Sustainability Program
Specialist

“It'd be really hard to offer an assortment of good carbon credit projects — the particular layout; a marketplace inside the admin would run afoul of our commitment to making sure "the admin is where merchants go to work on their business."”

David Vranicar,
Sustainability
Operations Lead

“Credit traceability is definitely one issue with the carbon markets today. Another is project quality.”

Mitchel Selby,
Senior
Sustainability
Program
Specialist

FINDINGS

Data Analysis and User Behaviour Patterns

Based on the responses collected, several user behaviour patterns emerge:

Interest in Credit Traceability and Quality:

Users are concerned with the traceability of credits and the quality of carbon projects. There is a demand for features that help merchants identify reputable projects worth supporting.

Marketplace Engagement:

Interest exists in transacting carbon credits through Shopify, but challenges remain in offering a diverse assortment and keeping the admin workspace focused on core business activities.

Sustainability Integration:

There are internal barriers to integrating sustainability deeply into Shopify’s core products. However, apps or sales channels might serve as intermediaries to connect merchants with carbon credits.

OPTIMIZATION

Optimization Opportunities

Enhance Credit
Quality Indicators

Integrate a rating system or endorsements from reputable companies to highlight high-quality projects. This would provide merchants with confidence in the projects they are supporting.

Streamline
Marketplace
Functionality

Position the marketplace as an application rather than a central feature. This could involve developing a separate app that doesn't clutter the main admin space, maintaining focus on business essentials.

Vetting and
Assortment

Prioritize partnerships with known quality credit suppliers and leverage existing relationships established by the Shopify Sustainability Fund. Consider automated vetting processes to ease bandwidth requirements.

RECOMMENDATIONS

Why This Matters for Shopify

Support Merchant Sustainability

Equip Shopify merchants with tools to easily engage in carbon offsetting aligned with their goals.

Capitalize on Market Growth

Enter the expanding carbon credit market, unlocking new revenue opportunities.

Ensure Trust and Transparency

Implement blockchain technology for credit traceability and quality assurance, building merchant trust.

Boost Brand Reputation

Establish Shopify as a sustainability leader by integrating carbon markets within the platform.

Cater to Consumer Demand

Address the rising consumer preference for eco-friendly brands!

Drive Innovation

Differentiate Shopify by offering unique sustainability-focused solutions ahead of competitors.