

CarbonCred

Micro Carbon Credits for Small Businesses

STARTUP HACKATHON 2025 | TEAM ECO-PULSE

| The Problem

- ✕ **Exclusion:** Carbon markets are built for industrial giants, leaving 90% of businesses behind.
- ⚙️ **Complexity:** Tracking Scope 1, 2, & 3 emissions is a nightmare for small teams.
- \$ **High Entry Barrier:** Professional audits cost more than the credits are worth.
- 🚫 **Missed Incentives:** SMEs have zero financial motivation to go green.



| Why This Matters

90%

OF GLOBAL BUSINESSES

44%

OF INDUSTRIAL
EMISSIONS

<1%

ACCESS TO CREDITS

SMEs are the missing link in global sustainability.
We bridge the gap with affordable, micro-scale solutions.

| The CarbonCred Solution



Track

Easy-to-use dashboard for tracking energy, waste, and logistics emissions.



Mint

Convert small-scale reductions into verified "Micro Carbon Credits."



Trade

Sell credits to large enterprises and event organizers in real-time.

| Live **MVP** Overview

Emission Tracker

Calculates CO₂e based on utility bills, transport logs, and waste data. Real-time trends and breakdown by category.

The Marketplace

A seamless portal to list credits. Buyers can purchase and "retire" credits instantly, generating a secure Carbon Receipt.

Micro Credit Engine

Smart verification logic that validates reductions against SME-specific baselines before minting tokens.

Immutable Ledger

Every transaction, from emission input to credit retirement, is recorded on a transparent, verifiable hash-chain.

| The Flow: Data to Credits



1. Log

SME inputs monthly usage data.



2. Calc

AI estimates CO₂e footprint.



3. Mint

Credits minted for reductions.



4. Sell

Credits listed on marketplace.



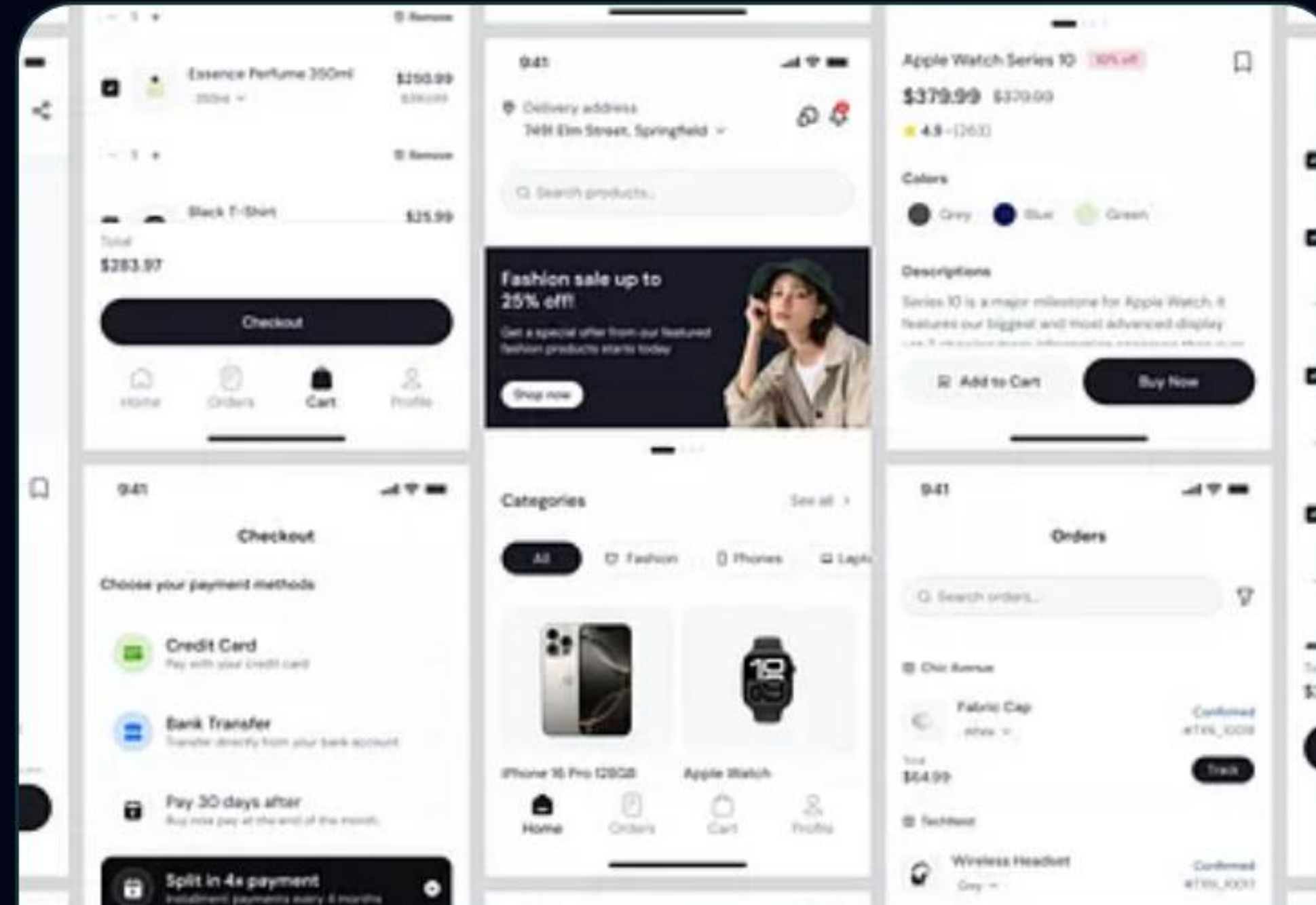
5. Receipt

Buyer gets proof of retirement.

Product Walkthrough

Dashboard

SME Dashboard



Marketplace

Ledger

Ledger Proof

Technology Architecture

Layer	Tech Stack	Function
Frontend	React + Tailwind CSS	Responsive Dashboard & Marketplace Interface
Backend	FastAPI (Python) / Node.js	High-performance API handling & logic
Ledger	Hash-chain / Ganache	Secure, immutable credit transaction recording
ML Layer	Scikit-learn / TensorFlow	Emission estimation & anomaly flagging
Database	Firebase / MongoDB	Scalable storage for user profile & historical data

| What Makes Us Unique



Micro-Granularity

Standard markets trade in tons. We trade in kilograms, allowing even a small cafe's reduction to be monetized.



AI-Driven Estimation

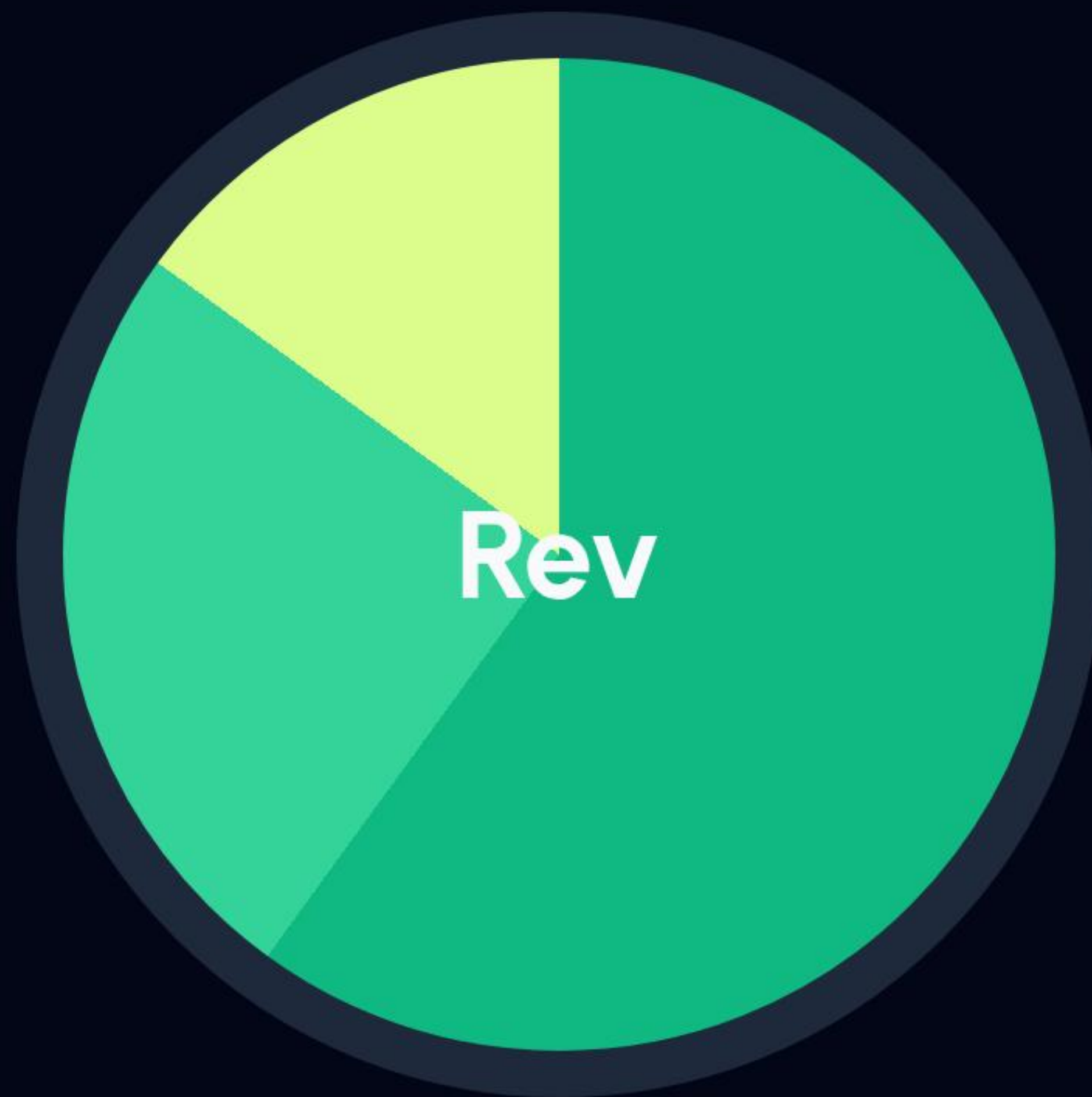
Proprietary ML models help SMEs estimate footprint with incomplete data, reducing the cost of entry by 90%.



Hybrid Ledger

Combines speed with blockchain transparency to prevent double-counting and ensure buyer trust.

| Business Model



- 60% Marketplace Fees (2-5%)
- 25% SaaS Compliance Tools
- 15% Enterprise ESG Reporting

Project Roadmap

Hackathon Final

MVP Release: Tracker +
Basic Marketplace.

Q4 2025

Partnerships with ESG
Consultants & Audit
Firms.

Q3 2025

IoT Sn. Meter
Integration & Pilot
Program.

2026

Global Expansion
across Retail &
Logistics.

The Team

Member	Role	Focus
Alex Rivera	Lead Developer	Backend APIs & ML Logic
Sarah Chen	UI/UX Designer	Frontend & Dashboard UX
James Okafor	Blockchain Lead	Ledger Security & Minting
Mia Wong	Data Scientist	Emission Models & Analytics
David Smith	Business Strategist	Pitch, Design & Partnerships
Elena Cruz	Integration Specialist	Testing & Live Demo Prep

Thank You! Questions?

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Image Sources



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