GreenCoin

Whitepaper

Unlocking a sustainable future
with Blockchain

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UNLOCKING A SUSTAINABLE FUTURE WITH BLOCKCHAIN

GreenCoin - Disrupting Carbon Credit Markets!

Join the movement towards a more sustainable future with our decentralized app that rewards your low-carbon lifestyle. Every small action counts! And with our platform, reducing your carbon footprint becomes even more rewarding.

Our platform goes beyond traditional utility tokens by incorporating IoT technology and RWA for measurable environmental impact. Each user's real-world low-carbon actions, such as renewable energy use or electric vehicle mileage, are tracked using IoT-enabled devices and converted into verifiable data. This data-driven approach ensures transparency, traceability, and a direct link between individual behaviours and carbon impact reduction, reinforcing GreenCoin's commitment to promoting practical, low-carbon lifestyles!

With Greencoin Tokens, your small, everyday choices will lead to measurable change for the planet, all while rewarding your efforts!
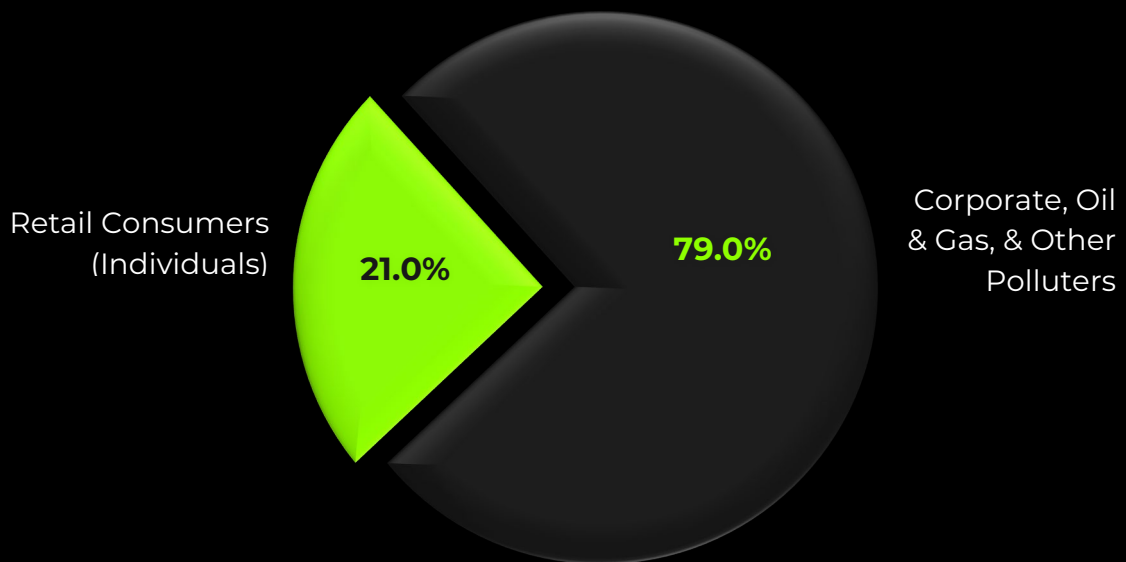
Our Vision

Our vision is to reward low carbon behaviour and provide accessibility to carbon credits in promoting widespread adoption of blockchain technology to enhance reduction of carbon emissions; including carbon traceability, accountability, and verification; with the ultimate goal of creating a blockchain based carbon ecosystem.

GreenCoin aims to bridge the gap between digital utility tokens and real-world environmental actions. Leveraging RWA, the platform introduces a unique integration with IoT devices to track, measure, and reward low-carbon behaviours. This combination enables precise, verifiable carbon data collection, allowing participants to seamlessly earn GreenCoin tokens for tangible, positive climate actions while contributing to global sustainability efforts. By tying blockchain-powered rewards to real-world environmental improvements, GreenCoin establishes a transparent, scalable approach to climate action

The Problems

Although big business, oil & gas and corporates are taxed with emission quotas and are restricted, there's no legislation stipulated for individuals. What's more? Individual climate actors impact the environment at significantly high ratios in comparison to corporate & industrial emissions combined.

Global Carbon Emissions Contributions: Individuals vs Corporate & Industry

Retail Consumers (Individuals)

21.0%

79.0%

Corporate, Oil & Gas, & Other Polluters

Source: https://www.smithsonianmag.com/smart-news/since-2016-80-percent-of-global-co2-emissions-come-from-just-57-companies-report-shows-180984118/

While corporations, especially in the oil and gas sectors, account for the majority of global carbon emissions, the role of individual consumers should not be underestimated.

Promoting low-carbon behaviours among individuals can collectively drive substantial impact, reducing demand for high-emission products and services and signaling a shift toward sustainable practices.

Empowering consumers with tools and incentives to adopt low-carbon activities not only enhances environmental responsibility but fosters a ripple effect of change within corporate practices. By aligning individual actions with broader corporate and policy shifts, a synergistic pathway emerges toward achieving a net-zero future.

Global Carbon Emissions Overview

Annual Emissions:
In 2023, global carbon dioxide (CO_2) emissions from fossil fuels and industry reached a record high of 37.55 billion metric tons, marking a 1.1% increase from the previous year.

Source:
https://www.statista.com/statistics/276629/global-co2-emissions/

Per Capita Emissions:
The global average per capita CO_2 emissions were approximately 4.8 metric tons in 2022.

Source:
https://www.statista.com/topics/5770/global-greenhouse-gas-emissions/

Challenges in Accounting for Individual Carbon Footprints

Data Gaps
Many consumers lack access to precise data on their personal carbon emissions, leading to underestimation of their environmental impact.

Behavioural Awareness
Without clear insights, individuals may not recognize how daily activities contribute to their carbon footprint, hindering efforts to adopt sustainable practices.

GreenLabs' Contribution to Mitigating Carbon Emissions

- **Incentivizing Low-Carbon Behaviours:** GreenLabs' platform rewards users for engaging in sustainable actions, such as using electric vehicles, installing heat pumps, adopting solar energy, and utilizing improved cookstoves.

- **Carbon Footprint Tracking:** By providing tools to monitor and understand personal emissions, GreenLabs empowers users to make informed decisions that reduce their carbon footprint.

- **Community Engagement:** Through gamification and collaborative missions, GreenLabs fosters a community of eco-warriors committed to collective environmental impact.

Potential Impact

Emission Reductions
If a significant number of individuals adopt low-carbon behaviours through GreenLabs' platform, it could lead to substantial reductions in global CO_2 emissions.

Behavioural Change
Increased awareness and incentivization can drive long-term shifts toward sustainable lifestyles, amplifying the positive effects on the environment

By addressing the gap in individual carbon accounting and promoting actionable steps toward sustainability, GreenLabs plays a crucial role in the global effort to combat climate change.

Greenlabs Advocates for Responsible Climate Capitalism

GreenLabs advocates for Responsible Climate Capitalism by giving YOU the power to be a part of the Low-Carbon Revolution. We incentivize retail users to act positively towards the environment with a token reward system and also generate their own avoidance carbon credits!

GreenLabs enables savvy individuals to offset their carbon footprint by purchasing credits and retiring them. Also:

Play to X Gamification for "low carbon behaviour".

We utilize GreenCoin to provide accessibility to a carbon ecosystem on our platform for positive climate change.

Potential to generate own (avoidance) carbon credits | monetize your low carbon activities

HOW WE DO THIS?

GreenCoin initiative allows the user to register a single/multitude of low-carbon behaviour and data on our platform. We convert the behavioural data points into GreenCoin.

Expanding the Utility of Tokens: The integration of RWA and IoT-enabled tracking into GreenCoin's platform transforms the utility token into a multi-faceted tool for both rewarding climate action and enabling market-based incentives. While remaining a utility token, GreenCoin enhances its value proposition by offering eco-conscious participants access to real-world impact insights, community recognition, and the potential to influence the broader carbon market through transparent, traceable actions

Each tranche would be designated their own metric in earning GreenCoin Rewards for their low-carbon pattern. We are here to serve the Eco-Warriors!

The individual low carbon behaviour is captured by the software solution provided by GreenLabs

Hardware
Mobile + App (GreenLabs)

Software
Bespoke blockchain solution to record low carbon behaviour on-chain provided by the GreenCoin Initiative

Examples Of Low-Carbon Behaviours

Mobility

Use of EV vehicle

Cycling

Electric ride sharing

Energy Use

Using Solar Power

Heat Pump Installation

1. **Electric Vehicles (EVs)**

   Emission Reduction: On average, an EV produces about 50% fewer CO_2 emissions than a conventional internal combustion engine (ICE) vehicle over its lifetime.

   1. Annual Reduction: A typical EV can save approximately 4.6 metric tons of CO_2 per year compared to a gasoline-powered car.

   2. Global Impact: If 10% of all vehicles globally were replaced by EVs, it would lead to a reduction of approximately 600 million metric tons of CO_2 annually.

   Other Environmental Benefits
   - Reduction in air pollution due to zero tailpipe emissions.
   - Lower noise pollution compared to traditional vehicles.

2. **Heat Pumps**

   Efficiency: Heat pumps are typically 3 to 4 times more efficient than conventional heating systems (like electric resistance heaters or gas boilers).

   1. Emission Reduction: Switching from a fossil-fuel-based heating system to a heat pump can reduce household carbon emissions by up to 60%.

   2. Annual Savings: This translates to an average reduction of 2 metric tons of CO_2 per household annually.

   Additional Benefits
   - Reduced energy consumption leads to lower energy bills.
   - Versatile use for both heating and cooling needs, further reducing the environmental footprint.

3. **Solar Panels**

   Energy Generation: On average, a typical residential solar panel system (approximately 5 kW) can generate around 7,000 to 9,000 kWh per year.

   1. Emission Reduction: This can prevent the release of around 3 to 4 metric tons of CO_2 annually per household, based on average electricity grid emissions.

   2. Global Impact: Widespread adoption of solar panels could mitigate hundreds of millions of metric tons of CO_2 globally, depending on penetration rates.

   Other Environmental Benefits
   - Reduction in reliance on fossil fuels, contributing to energy independence.
   - Minimal water usage compared to traditional power generation.

4. **Improved Cookstoves**

Efficiency and Impact: Improved cookstoves can be 30% to 50% more efficient than traditional stoves, leading to a significant reduction in fuelwood usage.

1. Emission Reduction: A single improved cookstove can reduce emissions by 1.5 metric tons of CO_2 per year.

2. Global Benefits: If widely adopted, improved cookstoves could reduce global CO_2 emissions by hundreds of millions of metric tons per year.

Health and Social Benefits
- Reduction in indoor air pollution, improving respiratory health and reducing smoke-related illnesses.
- Decrease in deforestation rates due to lower wood demand.

Summary of Environmental Benefits:

- Carbon Emissions: Collectively, these low-carbon behaviours have the potential to significantly lower global carbon emissions. For instance, if 1% of the global population adopted these behaviours, millions of metric tons of CO_2 could be avoided each year.

- Additional Benefits: Beyond emissions reduction, these behaviours contribute to improved air quality, energy efficiency, cost savings for individuals, and a reduction in reliance on non-renewable energy sources.

GreenCoin Play to X Gamification

GreenLabs' mission to promote responsible climate capitalism and empower individuals in the low-carbon revolution, our platform integrates gamification mechanisms to incentivize eco-warriors for their sustainable actions. These features are designed to enhance user engagement, foster community collaboration, and amplify the environmental impact of our collective efforts.

1 Eco-Warrior Quests and Challenges

- Description: We offer themed quests and challenges that encourage specific low-carbon behaviours, such as utilizing electric vehicles, reducing energy consumption, installing solar panels, and adopting improved cookstoves.

- Implementation: Eco-warriors earn GreenCoin tokens for daily actions like riding EVs to work, using heat pumps, or minimizing household energy use.

- Reward Mechanism:
  - ❖ **Daily and Weekly Streaks:** Consistent completion of sustainable behaviours over set periods results in bonus GreenCoin tokens.
  - ❖ **Milestone Rewards:** Achieving significant milestones, such as avoiding 100 kg of CO_2 emissions, unlocks exclusive rewards like unique NFTs symbolizing environmental achievements.

2 Leaderboards and Tiers

- Description: Our platform features competitive leaderboards where eco-warriors can monitor their progress relative to peers, ranked based on cumulative carbon savings and engagement frequency.

- Implementation: Users advance through tiers—Bronze, Silver, Gold—reflecting their activity levels, with higher tiers offering enhanced rewards.

- Reward Mechanism:
  - ❖ **Tier-Based Rewards:** Advancing to higher tiers grants access to increased token multipliers and exclusive benefits.
  - ❖ **Seasonal Competitions:** Regular competitions reward top performers with special access to token pools, custom NFTs, and platform-wide recognition.

Customizable Avatar System and NFTs

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- Description: Eco-warriors can personalize avatars that represent their sustainability journey, with specific actions unlocking special features.

- Implementation: Completing tasks like installing solar panels or reducing energy consumption grants unique NFT badges, which can be showcased on profiles or traded within the community.

- Reward Mechanism:
  - ❖ **Earning NFT Badges:** Accomplishing challenges, such as reducing CO_2 emissions by 500 kg in a month, awards distinctive NFTs.
  - ❖ **Avatar Enhancements:** Sustainable actions provide "power-ups" to avatars, unlocking new features and increasing influence within the platform.

Collaborative Missions

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- Description: We facilitate community-driven missions where groups of eco-warriors collaborate to achieve collective goals, like reducing a combined 10,000 kg of CO_2 emissions in a month.

- Implementation: These missions encourage teamwork, fostering a sense of community and shared purpose among users.

- Reward Mechanism:
  - ❖ **Group Rewards:** Successful missions unlock larger token pools distributed among participants.
  - ❖ **Access to Exclusive Features:** High-performing teams gain access to advanced platform features, including participation in governance decisions.

Decentralized Governance and Voting Rights

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- Description: Eco-warriors are granted fractional voting rights based on their earned GreenCoin tokens, enabling them to influence platform decisions.

- Implementation: Token holders can propose and vote on initiatives that align with climate goals, enhancing their stake in the community's success.

- Reward Mechanism:
  - ❖ **Token Utility:** Active participation in governance fosters a sense of ownership and responsibility towards the platform's direction.

Carbon Footprint Offset Tracker

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- Description: Our platform includes a tracker that visualizes each user's cumulative carbon offset, allowing comparisons to global metrics.

- Implementation: The tracker provides visual representations of carbon savings over time, helping users understand their environmental impact.

- Reward Mechanism:
  - ❖ **Token Bonuses for Milestones**: Reaching specific carbon offset milestones, such as reducing 1 ton of CO_2, results in token airdrops or exclusive rewards.
  - ❖ **Interactive Milestone Goals:** Achieving stretch goals triggers platform-wide rewards, like bonus multipliers for all eco-warriors.

By integrating these gamification elements, GreenLabs transforms sustainability into an engaging, community-driven endeavour. Eco-warriors are rewarded for meaningful actions, enhancing user retention and contributing to the platform's long-term growth and profitability.

GreenCoin dApp Prototype

Workflows

Carbon Credit Registries

Onboarding credits to the platform

GreenCoin Token will be utilized for all transactions – Credit Purchasing + Climate Actor Rewarding + Currency Swapping etc.

GreenCoin Carbon dApp

Low carbon behaviour tracker and carbon trading incentive / bonus scheme

Purchase of credits from the dApp seamlessly

Carbon Credit Consumer

ALTERNATIVE ENERGY USAGE
Electric car mileage, Hydroelectric utility bill, Solar power use

GC Token/ NFT

Avoidance credit generation through accrued low carbon behaviour

Individual Low Carbon Consumption & Behaviour

- EV
- Solar panel
- Electric bike

Mobile Phone /IOT device capture

Low Carbon Behaviour Registration

Low carbon data analysis

Client Metrics

GC Token & NFT offer

Carbon Data Ownership

An encrypted transport layer for peer-to-peer communication- DIDs + VCs - for authentication, will allow climate actors and devices to directly exchange data in a confidential manner.

These elements allow us to send information in a "trustless" manner, which reduces the need to rely on third parties and instead makes it possible to verify the accuracy of the information and ownership.

A DID is a brand-new category of identification that permits decentralized, verified digital identity. Any topic that the DID's controller deems appropriate (for example, a person, group, object, data model, etc.) is referred to as a DID.

Verifiable Credentials - "reflect assertions made by an issuer – respecting privacy". To protect privacy, VCs enable digital watermarking of claims data using public key cryptography and other methods. This has the consequence of allowing physical credentials to be securely converted to digital credentials, as well as allowing holders of such credentials to selectively divulge information from such credentials without disclosing the actual data.
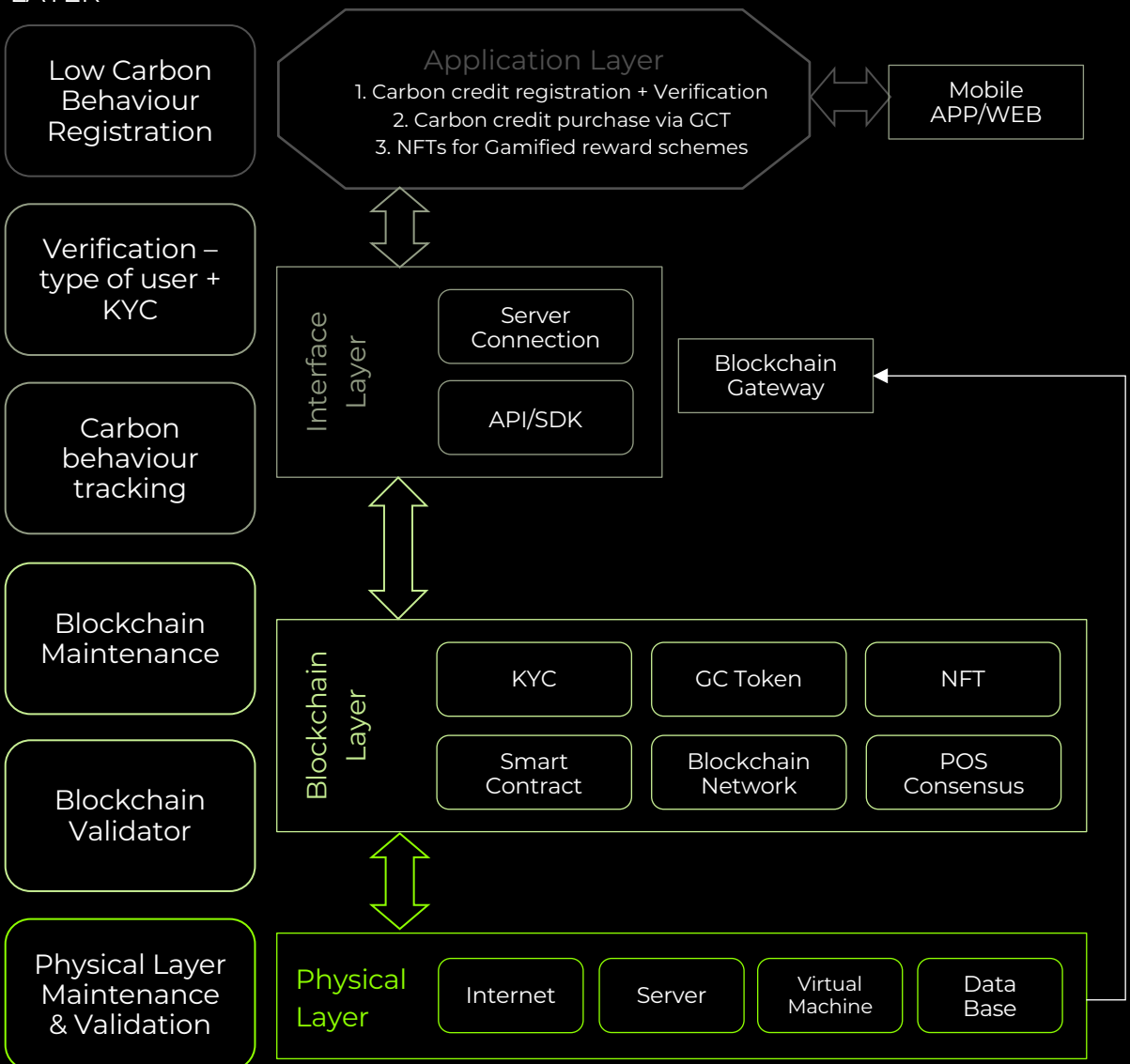
UI, Blockchain And Technical Architecture For Greencoin Initiative

UI

Retail Consumer/ Climate Actor	Carbon Credit Registries	Carbon Credit Consumer

BLOCKCHAIN SUPERVISION LAYER

Low Carbon Behaviour Registration

Application Layer
1. Carbon credit registration + Verification
2. Carbon credit purchase via GCT
3. NFTs for Gamified reward schemes

Mobile APP/WEB

Verification – type of user + KYC

Interface Layer
- Server Connection
- API/SDK

Blockchain Gateway

Carbon behaviour tracking

Blockchain Maintenance

Blockchain Layer
- KYC
- GC Token
- NFT
- Smart Contract
- Blockchain Network
- POS Consensus

Blockchain Validator

Physical Layer Maintenance & Validation

Physical Layer
- Internet
- Server
- Virtual Machine
- Data Base

Why GreenLabs?

Allows individuals to take the lead in decarbonizing efforts, contributing to **Positive Climate Capitalism**

REWARD BEHAVIOUR – First platform in the VCM space to provide fractionalized rewards for individual low carbon behaviour

TRADE CARBON – DeFi landscape enables to trade your cryptoasset in a much more liquid environment for spot trading as opposed to VCM

OFFSET CARBON – Offset footprints via burn mechanism in order to obtain carbon offset certificates against the token

GreenLabs' GreenCoin initiative aspires to be a pioneer of the industry by:

Instilling low-carbon behaviour to beat climate change

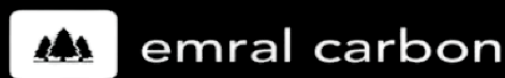Initiating individuals in charge of their decarbonising journey

Offering retail carbon offsetting options

Providing accessibility and opportunity to participate in the Carbon economy

GreenLabs – Our Strategic Partnerships

Revenue Model

Tailor-made In-house Harmonization Framework

- Ensuring harmonized quality across all credits on the GCT network

- Onboarded partner credits will be purchased by individuals through GCT pairings of USDT / BTC / ETH / SOL.

- Utility of GCT will be utilized across the ecosystem to provide retail carbon offsetting options through the sale of carbon credits.
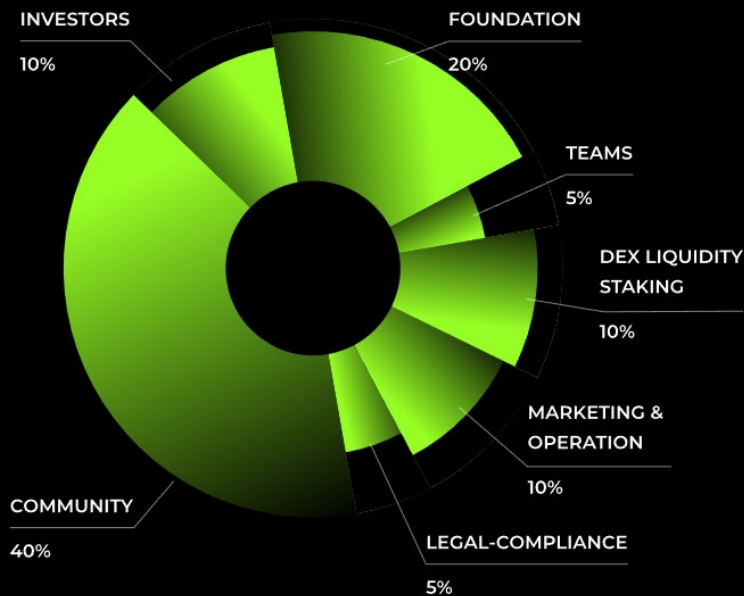
Value Addition through Low Carbon Behaviour

✓ 3rd party carbon data monetization

✓ Strategic partnership referral placement

✓ Token trading commissions

✓ Potential avoidance carbon credit generation through accrued low-carbon behaviour

GreenCoin Token Supply Allocation

GC Tokens in Circulation = 100 million (10 million allocated for pre-seed investment)

INVESTORS
10%

FOUNDATION
20%

TEAMS
5%

DEX LIQUIDITY STAKING
10%

MARKETING & OPERATION
10%

LEGAL-COMPLIANCE
5%

COMMUNITY
40%

Investors 10%
GC token equivalent of 10M will be allocated for the initial fundraising stage

Foundation 20%
GC's sustainable Carbon development allocated for core product research and development

Teams 5%
Allocation to support the team behind GC in the early stage; A delegated lock-in period of 3 years set.

DEX Liquidity Staking – 10%
10% GC Token staking allocation provided for decentralized exchanges

Marketing & Operation 10%
Token allocation for marketing, PR, community-building and carbon removal campaigns

Legal-compliance 5%
Utilized towards solicitor fees and legal administrative expenses

Community 40%
GreenCoin rewards for the community; mainly benefiting SMEs and project developer

Value Proposition Overview

- In-house experts in ERC-20 token creation, deployment, and investor onboarding (AML/KYC) coupled with crypto compliance and token management consultancy.

- In-house verification setup for recording, reporting, and monitoring of carbon credits corresponding to tokens on the blockchain.

- Expert team from fields of Blockchain, Fintech, RegTech, and compliance strategizing to establish a decentralized global carbon credit ecosystem.

ESG Expertise

- Experience with the Regulators on ESG initiatives, including ETS, ESG reporting frameworks.

- Service on leading ESG rating firm advisory boards.

- Contributions to the European Union's Horizon 2020 program, supporting net-zero and carbon projects.
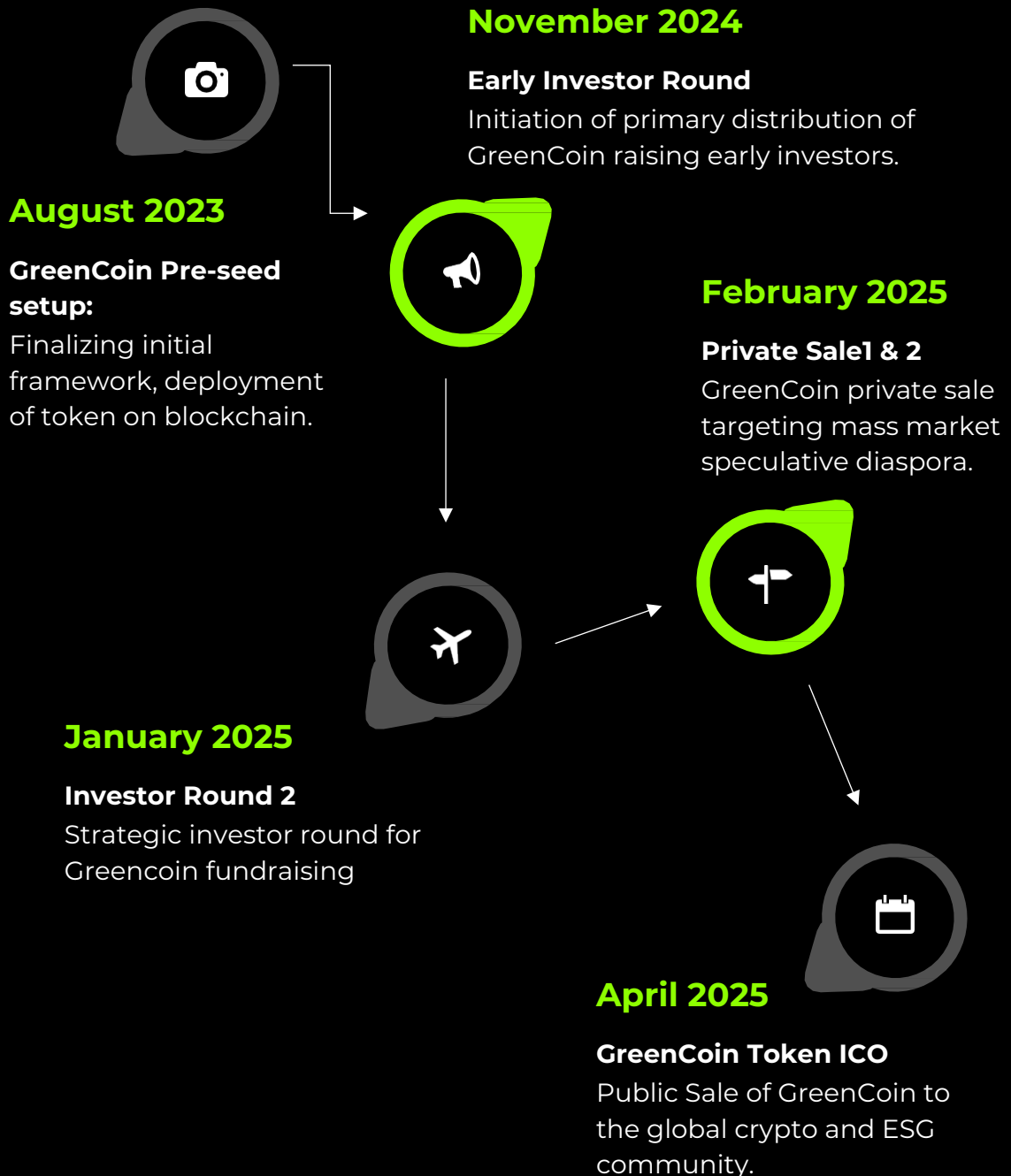
GreenCoin Vision

- Bolstering accessibility and proliferation of carbon credits.

- Promoting traceability, accountability, and verification for individual low carbon behaviour.

- Benefiting present and future generations.

Aligning with:

- Paris Agreement
- Kyoto Protocol
- United Nations Net-Zero coalition
- Race to Zero Campaign

GreenCoin Roadmap

November 2024

Early Investor Round
Initiation of primary distribution of GreenCoin raising early investors.

August 2023

GreenCoin Pre-seed setup:
Finalizing initial framework, deployment of token on blockchain.

February 2025

Private Sale1 & 2
GreenCoin private sale targeting mass market speculative diaspora.

January 2025

Investor Round 2
Strategic investor round for Greencoin fundraising

April 2025

GreenCoin Token ICO
Public Sale of GreenCoin to the global crypto and ESG community.

Contact

We thank you for your time & support in our efforts to promote Climate Capitalism!

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SCAN ME