

Technology Enabling a Carbon-Neutral Future

Supply chain, Buildings, Energy, and Finance



Confidential

2021.4.14



Max Song

CEO

Max Song is the founder and CEO of Carbonbase. He worked as a venture capitalist in Yingke Development (Li Zekai's family office), responsible for the investment field of AI and blockchain.

In 2018, he created the Blockdynamics industrial blockchain consulting and solution consensus, and designed its first Asian blockchain project for Veolia, a French listed company.

Previously, he worked as a data scientist in Silicon Valley, Paris and New York, as a teaching researcher at Singularity University, and as a researcher at NASA Ames.

He graduated from Brown University with a bachelor's degree in applied mathematics, and received a master's degree in public administration from Schwarzman Scholars at Tsinghua University. His graduation thesis was written in the focus on green investment policies in the United States/China

PACIFIC CENTURY GROUP



Matthew Smith

Enterprise business development

18 years of experience at Cisco
Head of Global IoT and Smart City



Karen Wang

Data science and analysis

Microsoft
Merrill Lynch
Hong Kong Baptist University



Yee Chow

Carbon emissions analysis

4 years as Sustainability Manager at Accenture, and 6 years as Climate and Sustainability Manager at Cathay Pacific



Jenny Zhang

Products and design

6 years of experience of M&A at Deloitte
UC Berkeley



Mihai Hrimiuci

Carbon Offset Project Development

Leadership experience at NGOs
Experience in carbon offset development



Elliot David

Buiness Development

Schwarzman Scholar
Thesis focuses on carbon management
Clinton Foundation
African Business Facilitator (YABB)



Yuan Xun

Technology Architecture

Blockchain Lecturer at Tsinghua University,
Former chief developer of public chain



Diana Liu

Human Resources and Organizational Development
Master of Science, University of Tokyo
Fujitsu Group
Japan Recruit Group



Timmy Chen

Carbon Consulting Management

Ten years of experience in supply chain carbon accounting and sustainability management,
Worked at Li&Fung and Aldi sustainability department,
Supply Chain Auditor Qualification from China Certification & Inspection Group



Barbara Wang

Head of Green Finance

10+ years of experience at investment banks including Goldman Sachs, Deutsche Bank, and UBS,
Graduated from Stanford Finance Department



Mengdi Wang

Carbon Consulting

Worked at CDP Supply Chain North America,
Master of Environmental Management, Duke University



Sean Cheng

Market Participation

Serial entrepreneurs in the charity industry,
Fuqi Youth Core Team,
Black Apple Core Team,
Carbon verification certificate and experience

We have built sustainability communities around the world



Hosted TEDxSheungWan
www.tedxsheungwan.com



Co-hosted the Singapore Fintech Festival (SFF)
with the Monetary Authority of Singapore
www.sffswitch.com



Invited to speak at LiFung's Explorium



100 online salons on climate change
Currently more than 8000 viewers



Invited to speak at Rethink Forum,
Hong Kong's Largest Sustainable Development Summit



Invited to participate in 2020
KPMG Smart City Forum

We are supported by amazing investors

Incubated / Supported By



Genesis Program



(Formerly YC China)
Future Stars



by New World
Development

Committed Investors

Abraham Fund

San Francisco and Tel Aviv VC firm headed by Isaac Applbaum, seasoned venture capital professional

METAPLANET

Family Office of Jaan Tallin (co-founder of Skype, Angel investor in DeepMind, Ethereum ICO)

Vincent Cheung

Managing Director and the Chief Operating Officer of Nan Fung Group. Chairman of Nan Fung Life Sciences

ChinaRock Capital

Leading Venture Capital Firm in SF/Shanghai founded by Ding Chun - first institutional investor into Youku and Music.ly

BUSINESS MODEL

01



CARBONBASE

Carbonbase Core Service

We uses **Data & Blockchain** to
Connect Consumer and
Enterprise Together in a Green
Economy Ecosystem

Supply Chain Carbon Management

Help enterprises calculate their carbon emissions footprint Help
visualize supply chains and record emissions data on blockchain

Product Decarbonization

Use blockchain and data science, to help label products and
services as low carbon

Low Carbon Consumption

Guide and educate consumers to make low carbon choices in daily
life, and reward them for behavioral change

Regenerative Business

Develop future supply for carbon credits by regenerative
business, reforestation, impact with architecture

Business Model

Connect consumer and enterprise to build a green economy ecosystem



Individuals can calculate carbon footprint and choose personalized plans to lead a low carbon lifestyle. In exchange, they will receive coupons, discounts and membership.

A growing consumer base for sustainable products and services

CONSUMERS

Solving climate issues takes community efforts. Carbonbase targets to build the most influential climate think tank in Asia

Impact

COMMUNITY

Businesses can use the Carbonbase enterprise SaaS tool to calculate their existing carbon footprint, and track the carbon emissions through manufacturing and supply chain process.

The data will be recorded on the blockchain to create transparent and auditable ledger. Enterprise carbon neutrality can be used for sustainable finance documentation.

Enterprise Carbon Neutral SaaS tool

ENTERPRISE

Technologies

AI
Blockchain
Saas Dev

CARBONBASE TECHNOLOGY ADVANTAGES



SaaS software development

- Carbonbase has good track record building SaaS platform for enterprise (Veolia)
- Our core tech team member has 22 years of experience worked at IBM, built the JAVA Eclipse IDE and developed Shopify's Carbon Offset App
- We believe that there is a under-represented technology penetration in transport and food emission calculations, especially with a retail focus - and that will give us a unique market offering right now

Blockchain Development

- Our core blockchain developer was a former Blockchain Lecturer at Tsinghua University, former public chain lead developer
- We think that there is only a few companies in the world that are developing blockchain-based emission records for carbon emissions



Artificial Intelligence

- We are using imagery analysis to monitor the environment, facilitating carbon MRV (Measurement, Reporting and Verification)
- Our core AI developer is a graduate from a leading AI classs in Chin, won 1st place in Google LPCVC Challenge DSP Track at ICCV'19, and 1st place in Google LPCVC Challenge Classification & Detection Track at NeurlPS'19

CARBONBASE CLIENTS
CASES

CLIENT SUCCESS

02

CARBONBASE

Carbonbase is working with industry-leader enterprise clients driving sustainability transition in their fields

- We were accepted as part of New World Development's Impact Kommons accelerator, to help **measure their commercial and retail tenants carbon footprint and environmental impact**
- New World Development Group is the 4th largest real estate developer in Hong Kong, and is a pioneer in incorporating SDG into their business priorities.
- We are helping Wah Kwong to **calculate carbon emissions, build assessment and strategy for neutrality, and develop digital tools to monitor carbon footprint.**
- Wah Kwong is a HK family owned shipping company with 70+ year history. In 2020, Wah Kwong became the **first HK shipping company to set a carbon neutral goals.**



Carbonbase uses blockchain to help companies develop more transparent and sustainable supply chains

- Carbonbase is working with the Explorium (Li & Fung's innovation lab) to educate BU heads on the application of **blockchain tracking for carbon emissions, and take residency inside its startup ecosystem**, with focus on launching a POC in Q1 2021.
- Li & Fung is a global supply chain management company with 110+ year history, that is in the midst of a digital transformation.
- Carbonbase's founding team was invited to design and develop **a novel digital blockchain-based procurement platform for the supply chain** of a Veolia industrial BU in China.
- Veolia is a Fortune 500 company with \$25 billion of yearly revenue, focusing on environmental services, energy production, water and waste management.

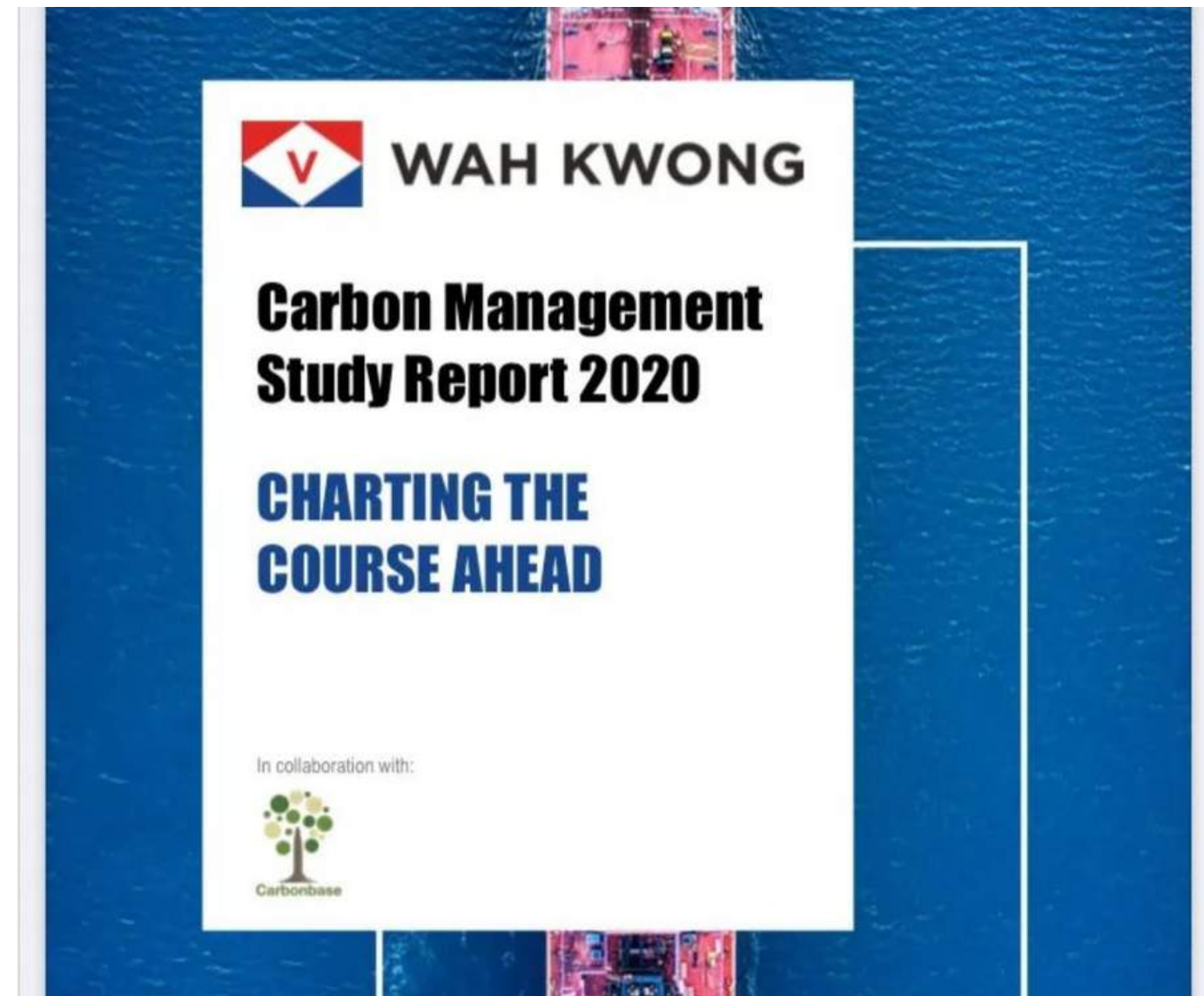
 **LI & FUNG**

利 程 坊 **EXP LOR IUM**



 **VEOLIA**
ENVIRONMENTAL
SERVICES





Featured Case

Wah Kwong Group is one of the largest private shipping companies in Hong Kong, with a history of more than 70 years. The International Maritime Organization has issued emission reduction regulations. The goal is to reduce the carbon intensity of ship transportation by 70% and the shipping volume by at least 50% by 2050. Wah Kwong needs to systematically master emissions data of its own and their supply chain to reduce emissions in accordance with IMO standards as well as maintain the stability of business and operations, and the efficiency of decision-making and management. With the support of Carbonbase, Wah Kwong has become the first shipping company in Hong Kong to set a carbon neutral goal in November 2020.

SaaS 产品总览

SaaS定制化系统

Dashboard

Jane Doe

View Ship View Edit Data

Dashboard >> View

WAH KWONG
MARITIME TRANSPORT HOLDINGS LIMITED

Granularity: Annual

FULL EMISSIONS BY SCOPE

VOYAGE CHARTER: WK owned %, 3P owned %
TIME CHARTER: WK owned %, 3P owned %

EMISSION BY SHIP

Search ship

Ship Name

- Hong Kong Spirit
- Cape Victory
- Ocean Venture
- Cape Asia
- Aqua Venture

Asset Management >> View assets

Ship Name	Ship ID	IMO Number	Vessel Type	Fuel
Hong Kong Spirit	JHK	9602289	VLCC	HFO, I
Trikwong Venture	WTV	9525361	VLCC	HFO, I
Straight Venture	XSV	9525222	Bulker	HFO, I
Great Venture	XGV	9864526	Bulker	HFO, I

Upload Data

Jane Doe

Add contract data View contract data

Here you can add ship-leasing contract data
Check out our [short video](#) to see how it works
Or check out our [tutorial guide](#) to learn more

Upload Data >> Add New

Add New Contract Data

Ship -Voyage ID: Input text

Voyage Origin: Singapore

Voyage Destination: Hong Kong

Voyage Start Date: 02/05/2020

Voyage End Date: 02/04/2021

Charter Details

Charter Type: Time-Charter

Charterer Name: 3P

Cargo

Cargo Type: Liquid Bulk

Weight: 608 tons

Weight of the cargo type carried

+ Add cargo type

SAVE CANCEL

构建一站式碳计算的流程，诊断碳排放来源和分布，进行全面和精准的碳核算，为企业碳中和落地方案出谋划策

区块链赋能碳管理平台：让供应链上的碳足迹透明可视化，便于记录和追溯排放数据。去中心化管理，便于跟踪、验证数据及交互，显著提高效率和公信力。

In collaboration with:



SaaS Tool includes a built-carbon offset marketplace that connects to global reduction projects for easy corporate purchase

The image displays two screenshots of the Offset Marketplace SaaS tool interface, illustrating the process of browsing projects and managing a carbon offset portfolio.

Left Screenshot: Browse Projects

- Header:** Offset Marketplace, Jane Doe
- Navigation:** Browse Projects, My portfolio
- Filters:**
 - FILTER BY TYPE:** Reforestation (4), Cookstove (12), Recycling (11)
 - FILTER BY REGION:** North America (3), South America (9), Africa (7), Europe (4), Asia (4)
- Project Card:**
 - Solar Cookers for Refugees** (Chad | Renewable Energy | Africa)
 - Description:** Refugees in Chad are provided with CookKits, which is made only with cardboard and aluminum foil but can cook most dishes within 2-3 hours by reflecting sunlight onto a black-painted pan that is contained in a heat-resistant plastic bag in which the warm air circulates. The CookKits are manufactured...
 - Inputs:** 20,000 tons OR Input % value % of base case
 - Button:** Add to portfolio
- Offset Project Portfolio:**
 - Cookstoves
 - Africa | Chad
 - Asia | Myanmar
 - Reforestation
 - South America | Brazil
 - Wind Power
 - Asia | India
 - Analyse**

SaaS Tool includes a built-carbon solution marketplace that connects to technology solutions providers and includes modeling for potential emission reduction

The image displays two side-by-side screenshots of a SaaS tool interface. The left screenshot shows the 'Browse Solutions' page, and the right screenshot shows the 'Analyze Impact' page.

Left Screenshot: Browse Solutions

- Header: Solutions Marketplace, Jane Doe
- Navigation: Browse Solutions (active), Analyze impact
- Filter by Type:
 - Fuel Innovation (3)
 - Drag Reduction (4) (active)
 - Propulsion (5)
 - Route Optimization (7)
 - New Build (2)
- Content:
 - Hull-Cleaning Robot (Kongsberg): The HullSkater technology is based on KONGSBERG's long experience within marine robotics and remote operations, resulting in more energy efficient operations and reduced CO2 emissions. [more](#)
 - Air Lubrication (Silverstream): The Silverstream® System, a type of Air Lubrication System (ALS), pumps tiny bubbles through vents on the hull to reduce friction between the vessel and the water, helping it glide. [more](#)

Right Screenshot: Analyze Impact

- Header: Solutions Marketplace, Jane Doe
- Navigation: Browse Solutions, Analyze impact (active)
- Content:
 - CO2 Emissions by asset type: A bar chart comparing 'Base Case' and 'After potential reduction' scenarios. The 'After potential reduction' scenario shows a 12.7% potential CO2 reduction. Assets include Aframax, Bulker, and VLCC.
 - Solutions Portfolio:
 - Hull Cleaning Robot
 - Hullskater
 - Air Lubrication
 - Silverstream
 - [Analyse](#) button

CARBONBASE CLIENTS
CASES

RETAIL

Appendix

CARBONBASE

奇绩创坛

从 5000 + 企业中
入选“未来之星”项目

奇绩创坛前身是YC中国，
由陆奇博士于2018年创
立，主要专注于早期技术
驱动型项目的投资、加速
和创业者社区建设。碳中
宝作为唯一一家碳中和初
创企业，被选中成为参加
路演日的创业公司之一



在海内外建立了可持续社区



主办了 TEDxSheungWan
www.tedxsheungwan.com



与新加坡金管局协办新加坡金融科技节
(Singapore Fintech Festival, SFF)
www.sffxswitch.com



受邀参加 LiFung's Explorium 演讲



100 期气候变化线上沙龙
目前累计超过5000观众



Rethink 论坛演讲
香港最大可持续发展峰会



受邀参加2020 KPMG 智慧城市论坛

Carbonbase Press and Recognition



Carbonbase was selected from hundreds of applications from 30 countries as one of the Impact Kommon Cohort 2 Startups to help **New World Group** push forward their sustainability goals



Carbonbase co-hosted a panel with **Monetary Authority of Singapore** during a panel discussion on technology, finance and policy for climate change on the sidelines of **2020 Singapore FinTech Festival**

Can the private sector achieve net-zero emissions by 2050?

By Yao Nian



Carbonbase won 1st place at the **Microsoft Hong Kong x Swire Trust AI for Good Challenge 2020** with a solution to scale up citizen climate actions

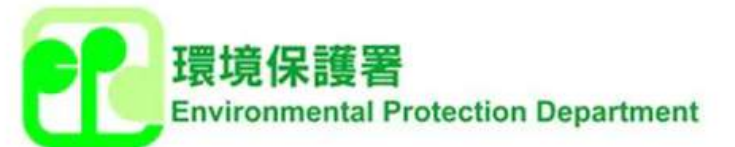
Making a difference with technology: Hong Kong startups strive to save local marine life with Artificial Intelligence

Dec 15, 2020 | [Microsoft Hong Kong](#)



荣获 1 等奖

Microsoft AI for Good Challenge 2020



Building sustainability communities



SINGAPORE FINTECH WEEK PANEL
Panel Discussion on Technology, Finance, & Policy for Climate Change

AI
Data
Sustainability
Green Finance

DECEMBER 9
13:00 - 14:00
ONLINE

APPLY AT
[HTTPS://WWW.SFFXSWITCH.COM/](https://www.sffxswitch.com/)

FINAIM
Carbonbase

4:22

←

AFF Asian Financial Forum (AFF)
4,160 followers
7h · 🌐

"#Climatechange is the most urgent problem of our generation. We believe that there is an incredible opportunity to be able to work on this problem in China and around the world."

#HongKong #tech #startup Carbonbase drives #sustainability by helping companies measure, report and neutralise their #CarbonEmissions with #blockchain and #DataScience.

Check out the interview with Carbonbase's founder and Schwarzman scholar Max Song, who looks to develop more #greenfinance and carbon finance projects in future.

<https://bit.ly/3mHXiiP>



How green is my tally | Hong Kong Means Business

hkmb.hktdc.com · 3 min read

Carbonbase has a rich ecosystem partner pipeline across major lifestyle verticals

Food and household



Shipping, Mobility and utilities



Ecommerce and sustainable fashion



STYLECAROUSEL

stain

kmana

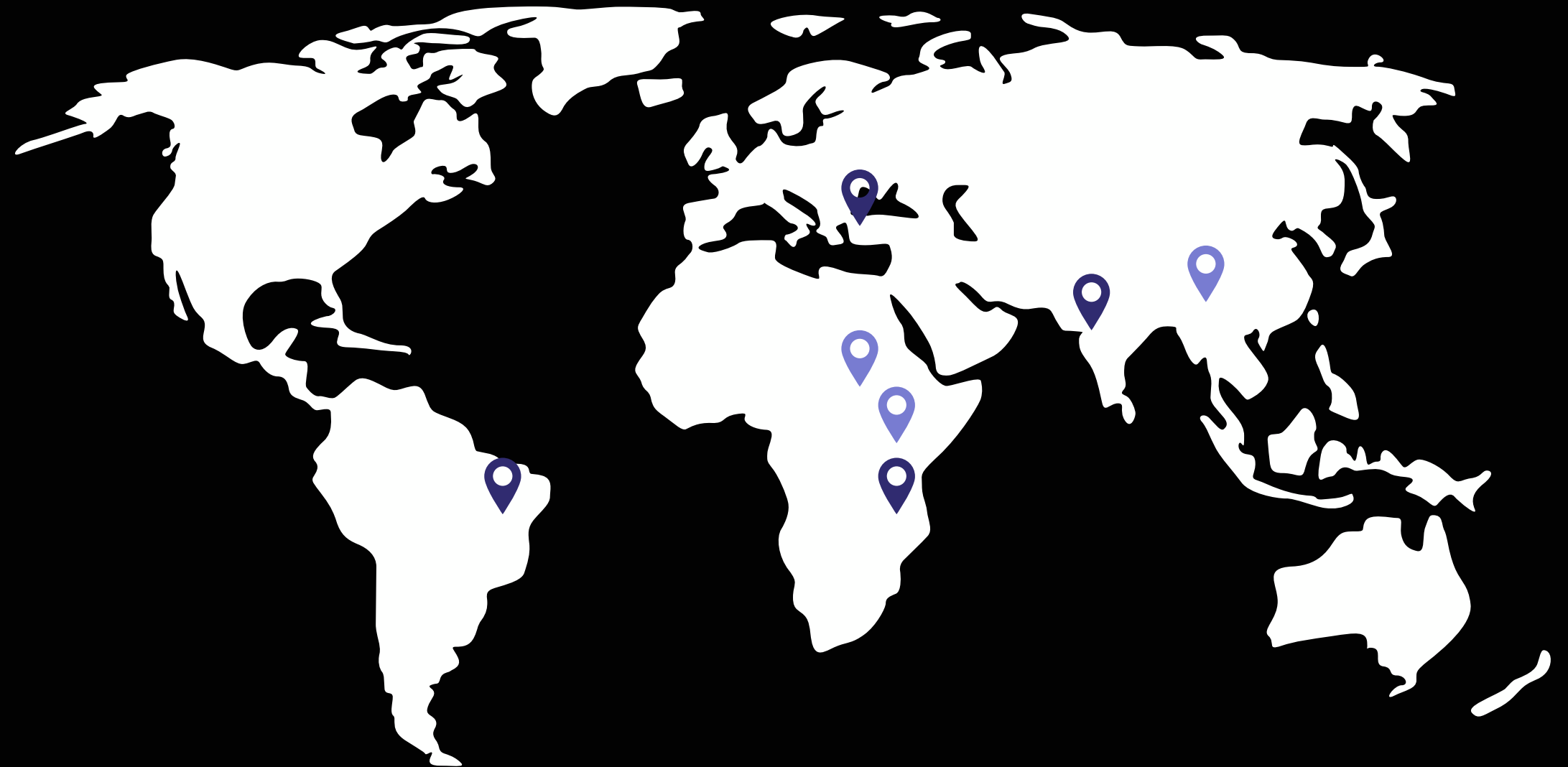
Gaming and digital experiences



PolyU Multimedia Lab

Carbonbase Project Locations

We support a variety of projects from around the world, focusing on the developing world context



01 CARBON REGISTRIES

We only work with projects that have been registered and accredited by the Gold Standard (founded by WWF) and Verra (founded by WEF) respectively.

02 ADDITIONALITY

We work with projects with high "additionality" - meaning that the money from the projects have direct actionable impact to increase the scope of the project, and that the emission reduction solution would not have happened otherwise.

03 IMPACT (SDGS)

We select projects that have been shown to create positive co-benefits along the Sustainable Development Goals (SDGs) for the communities in which they are implemented, catalyzing system-thinking solutions and positive externalities.

04 PROVEN TRACK RECORD

We interview founders of projects, and evaluate each project through an internal review and assessment process, studying their total track record, and prioritizing projects and developers that have shown consistent delivery on high quality outcomes.

Carbonbase Project Selection Approach -

Gold Standard®



MULTI-DIMENSIONAL PROJECT EVALUATION

Monetary value of Gold Standard project impacts per ton of reduced CO2 emissions (Figure updated Dec 2019)

Source: <https://www.goldstandard.org/blog-item/carbon-pricing-why-do-prices-vary-project-type>

TRANSPARENCY IN PRICING

Currently, disclosure of the price you pay for carbon credits is optional in the voluntary market

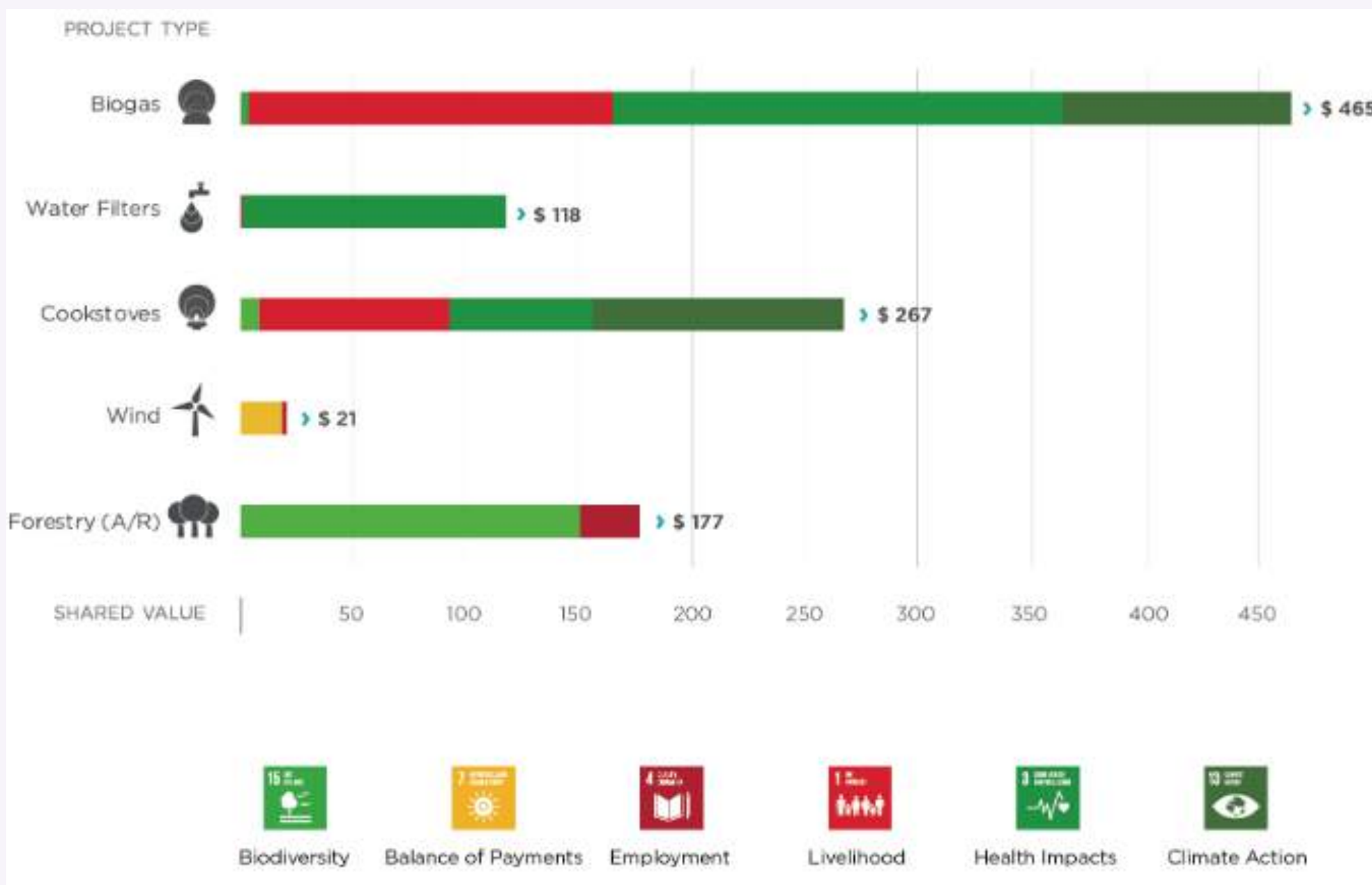
SIZE AND LOCATION

The size of the project can be important when considering the cost of the credit issued.

DIFFERENT METHODOLOGIES

Prices can vary within the same project type and this can often be related to the methodology used for the project.

CARBONBASE HAS FOCUSED ON HIGH SDG PROJECTS TO WORK WITH



Efficient Cooking Stove: Myanmar



Cookstoves

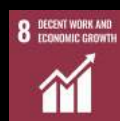
The Envirofit SuperSaver GL - known locally as the “five-minute stove” - was selected for its efficiency, safety, and compatibility with traditional cooking methods. Three sticks of wood create enough heat for boiling, which cuts fuel requirements by 50%. The heat and smoke are retained in the central section of the stove, providing a much cleaner method of cooking than an open fire. Sparks do not escape the combustion chamber, greatly reducing the risk of a household fire.

Impact

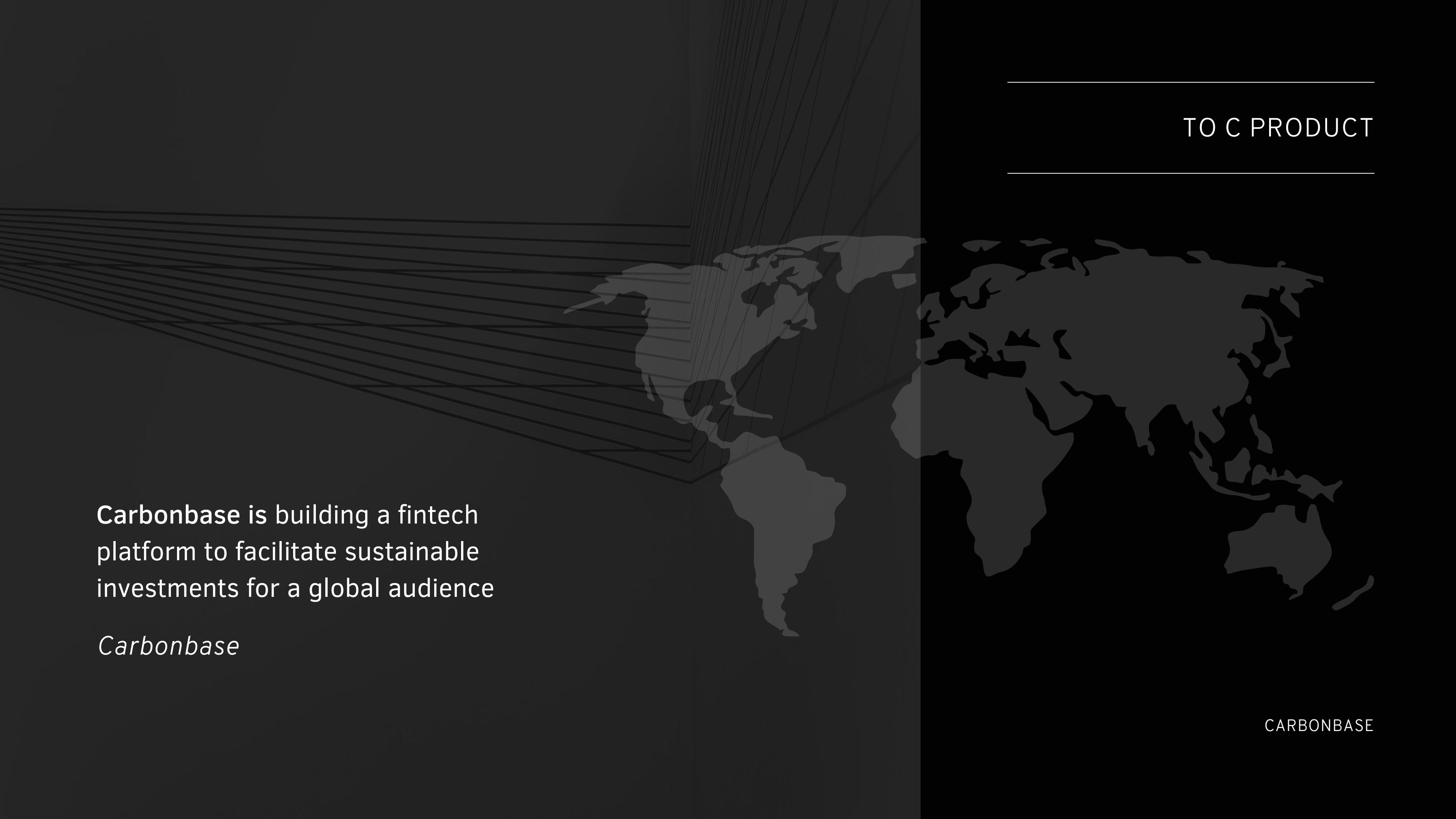
- Carbon emissions are reduced by 60% or 4 tons per year, per each stove.
- Each stove saves 2.5 tons of wood per year.
- The 35,000 fuel-efficient stoves sold to date have improved the lives of over 160,000 people.

SDGs

- Indoor cooking on inefficient stoves is a silent killer. Air pollution from domestic cooking is responsible for the premature deaths of over 4 million people a year—more than HIV Aids and malaria combined. Air pollution is reduced by 80% using an efficient cookstove.
- A more efficient stove is particularly beneficial for women and children spending much of their time cooking and gathering firewood.
- A traditional three-stone stove produces a lot of smoke and burnt wood quickly. Energy for cooking becomes much more affordable and available after switching to the “five-minute stove” as a result of increased efficiency.
- Rural families in Myanmar spend as much as 40% of their income – or the time equivalent – on purchasing or collecting firewood. US\$40 saved per household per year can be used toward other economically beneficial activities such as education and/or running a side business.
- Carbon emissions are reduced by 60%, or four tons per year, per stove. Each stove saves 2.5 tonnes of wood per year.



TO C PRODUCT



Carbonbase is building a fintech platform to facilitate sustainable investments for a global audience

Carbonbase

CARBONBASE

App for consumers

Green consumption

Carbonbase application allows users a frictionless and fun way to **calculate and understand** the connection between their daily actions (diet, transportation, consumption, energy use) with their personalized carbon footprint, **learn how to reduce** their footprint with low carbon activities, and **offset** through pre-vetted, high quality impact projects

Universal Public Record: Carbonbase records the climate action that users perform into a public blockchain ledger, so it is easily verifiable, and leaves a transparent record

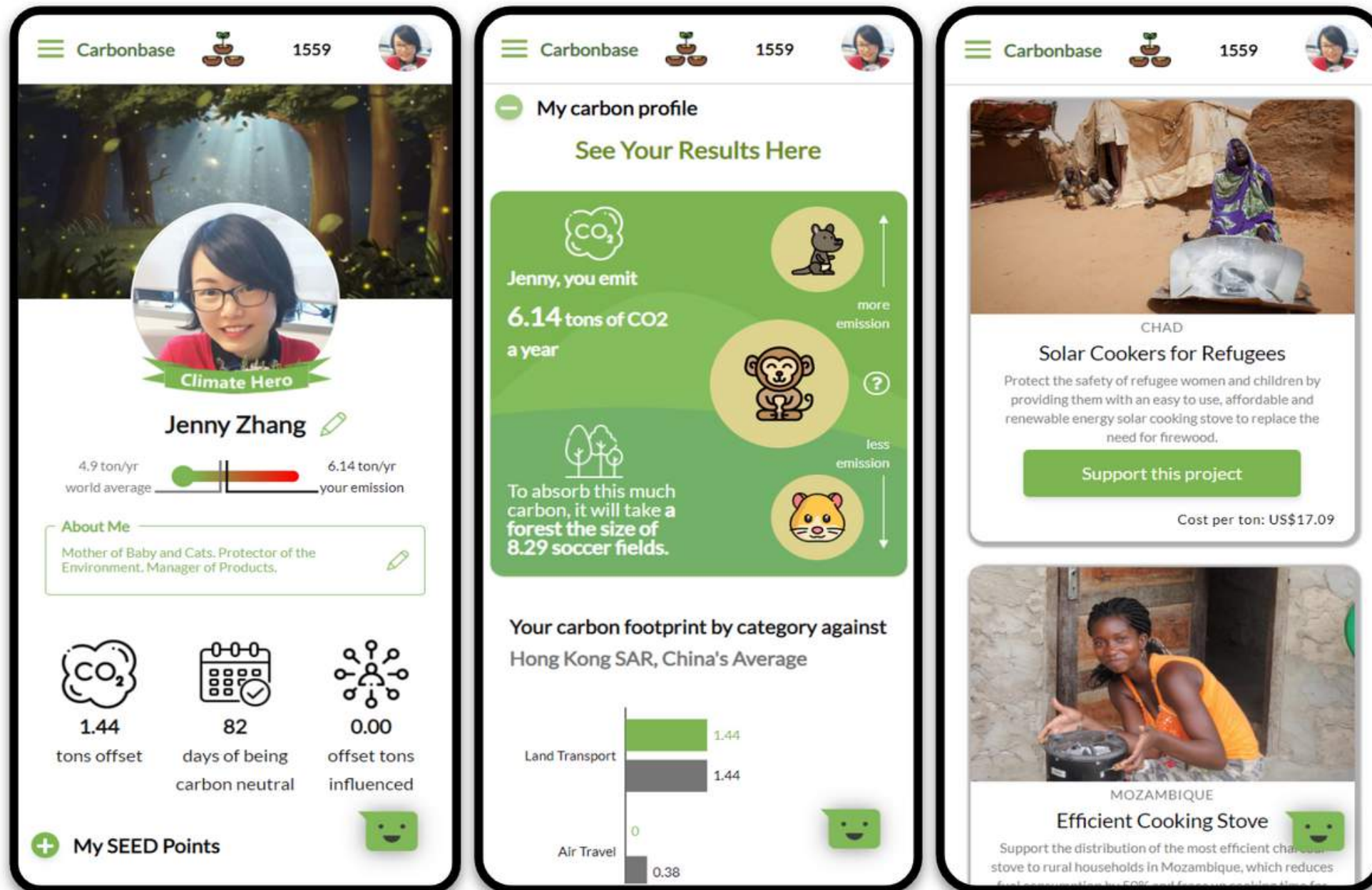
Loyalty Program: Carbonbase works with consumer-facing brands to provide rewards, discounts, and experiences for choosing to reduce or offset their own personal carbon footprints



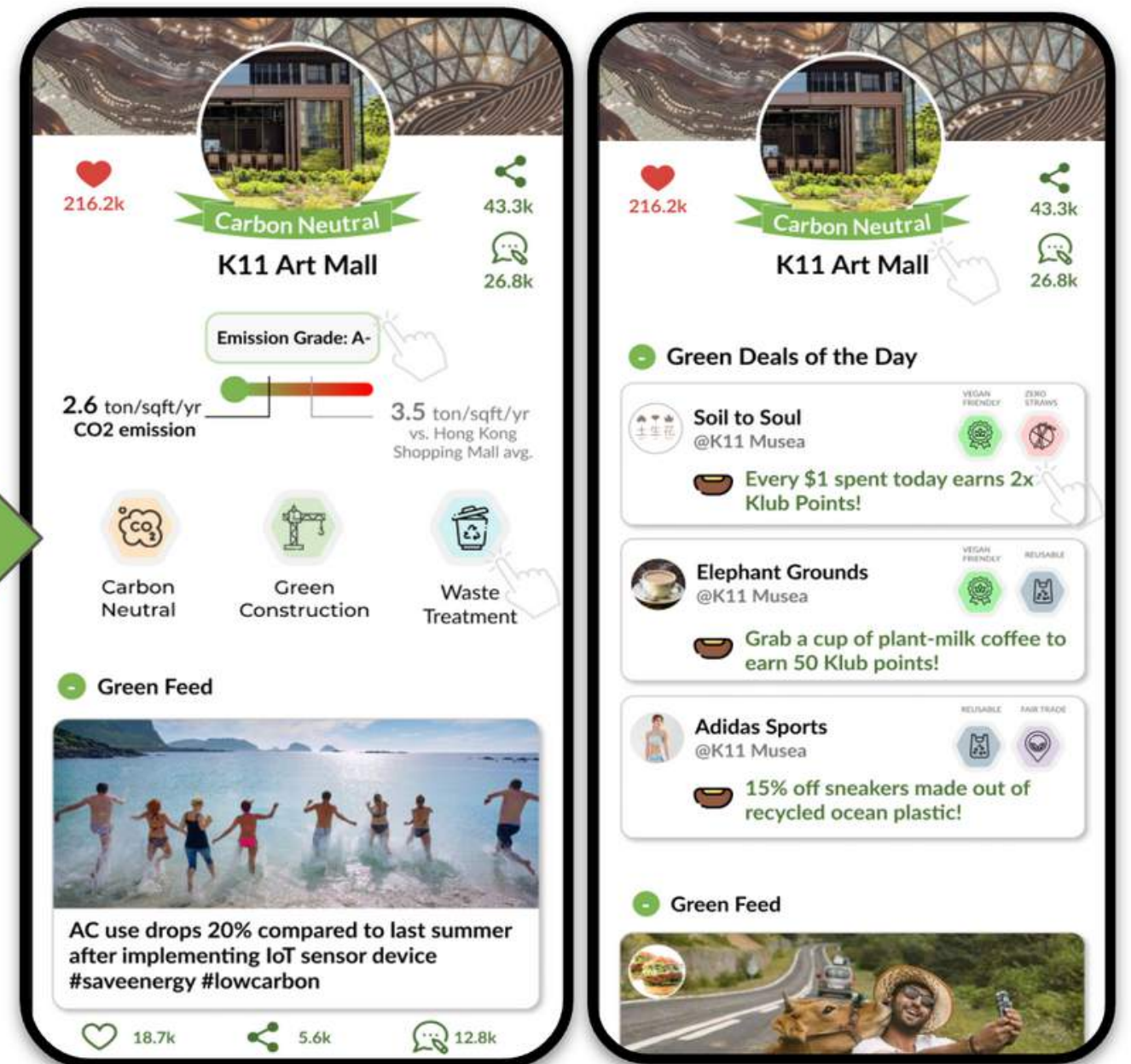
Hong Kong K11 Mall: Consumer Carbon Offset App

Carbonbase built a “green loyalty program” to connect eco businesses + eco consumers with carbon profile and rewards

Consumer carbon profile + carbon offsets + rewards

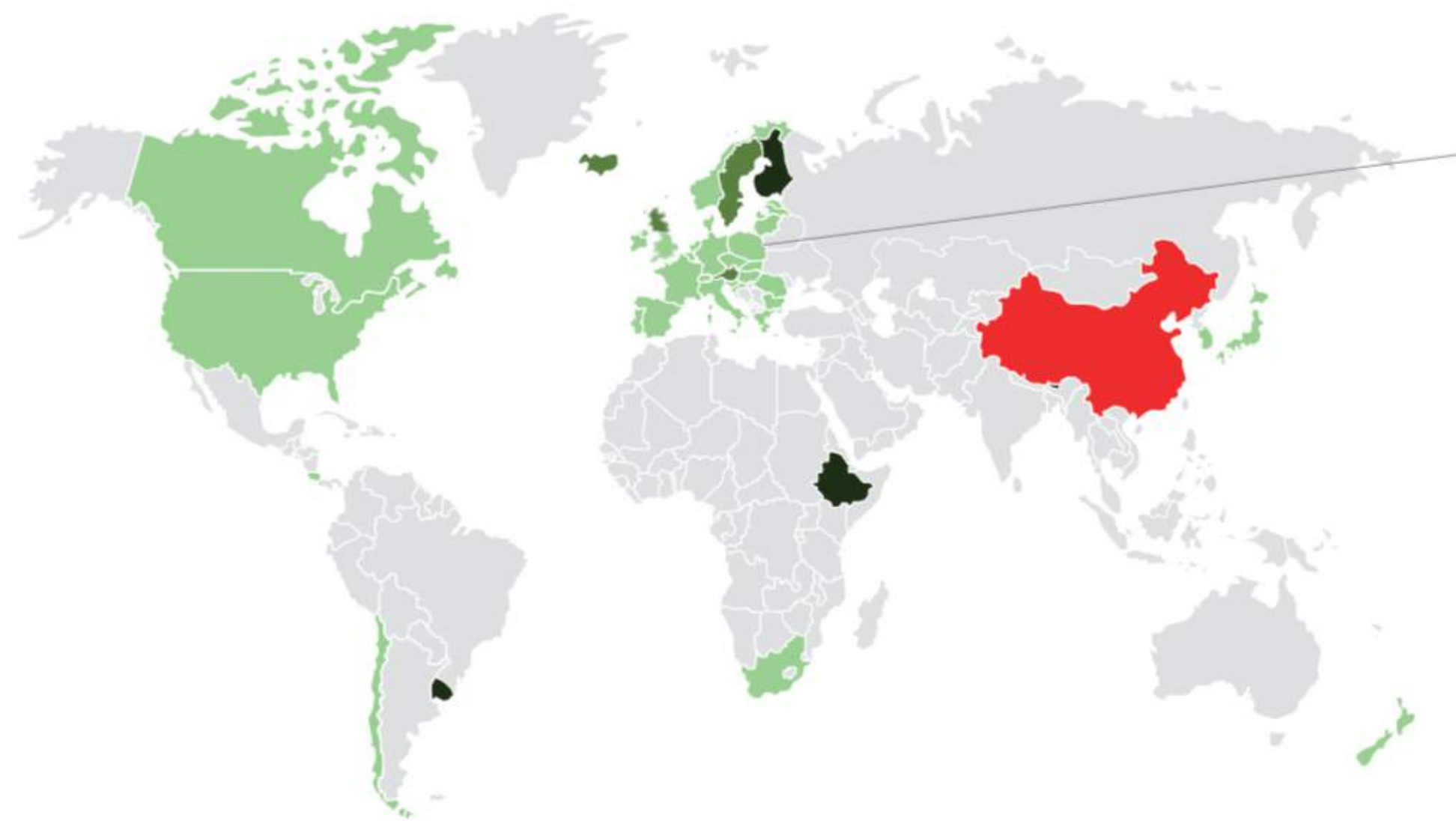


Business carbon profile + rewards



Carbon neutrality becomes the target of international carbon emission management

The countries accounting for over 65% of emission and 75% of GDP have proposed carbon neutral goals.

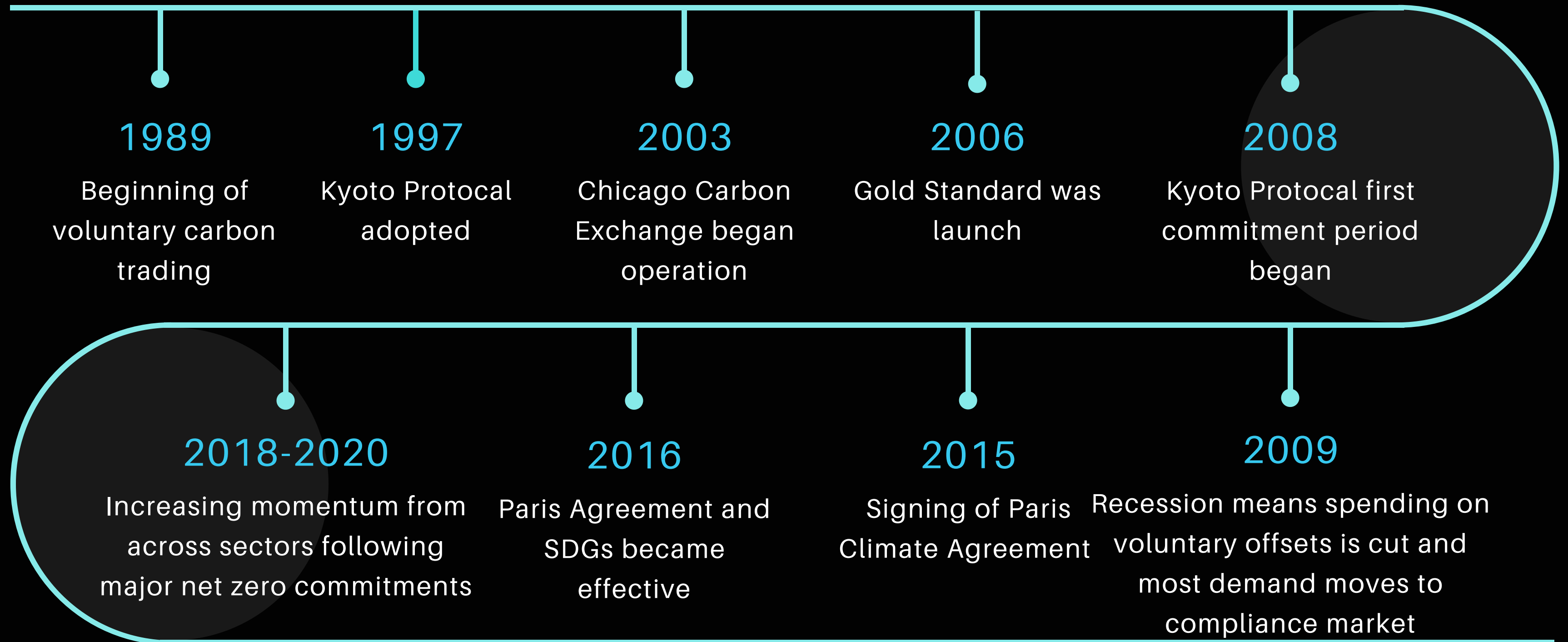


- The European Commission is working hard to achieve net zero emissions across the EU by 2050. The long-term strategy was submitted to the United Nations in March 2030
- Finland, Austria, Iceland and Sweden proposes carbon neutrality by 2035, 2040 and 2045, respectively.

- Carbon neutrality by 2035
- Carbon neutrality by 2045
- Carbon neutrality by 2050
- Carbon neutrality by 2060

History of voluntary carbon market

Milestones of international VCM



We help our clients
to build a Better
Climate Future



Contact Us

EMAIL ADDRESS

hello@carbonbase.co

WEBSITE 2C PRODUCT

carbonbase.co

LINKEDIN

<https://www.linkedin.com/company/carbonbase/>

CONTACT NUMBER

852-65612903

VIDEO INTRODUCTION

<https://youtu.be/nyOFPJ9cP8M>