

**Global  
Distributors  
Collective**



# Carbon Credits in the Last Mile Distribution Sector

5<sup>th</sup> March 2026

Funded by:



Transforming  
Energy  
Access

GDC is hosted by Practical Action alongside strategic and implementing partner Bopinc

**Practical  
ACTION**



# Agenda

- Welcome and Intro
- Scene setting: What is a carbon project?
- Findings and recommendations from upcoming GDC research
- Discussion with GDC members Sistema.bio and SPOUTS International
- Q&A
- Wrap up and close



Credit: Practical Action

# Who you'll hear from today



Davinia Cogan  
GDC Access to  
Finance Lead  
**Practical Action**



Alice Morton  
Director  
**Low Carbon Future**



Esther Altorfer  
Chief Strategy Officer  
**Sistema.bio**



Daniel Yin  
Chief Executive Officer  
**SPOUTS International**



Ronald Ampaire  
Global Carbon Specialist  
**SPOUTS International**



**What is a  
carbon project?**

# Poll



# GDC research findings



# Summary: Carbon Credits in the LMD Sector

## Five key takeaways from the research:

1. Carbon credit **demand** and **pricing** has shifted
2. Carbon buyers demand high **quality** and **integrity** credits
3. Carbon credits can be sold on the **voluntary** or **compliance** market
4. **Technology** and **scale** are top feasibility considerations
5. **Project country** is critical to feasibility assessment

## GDC member POV:



*Carbon credits represent an opportunity for profitability and growth but it requires high costs and effort.*

*The upfront costs are high and returns don't come until several years later.*

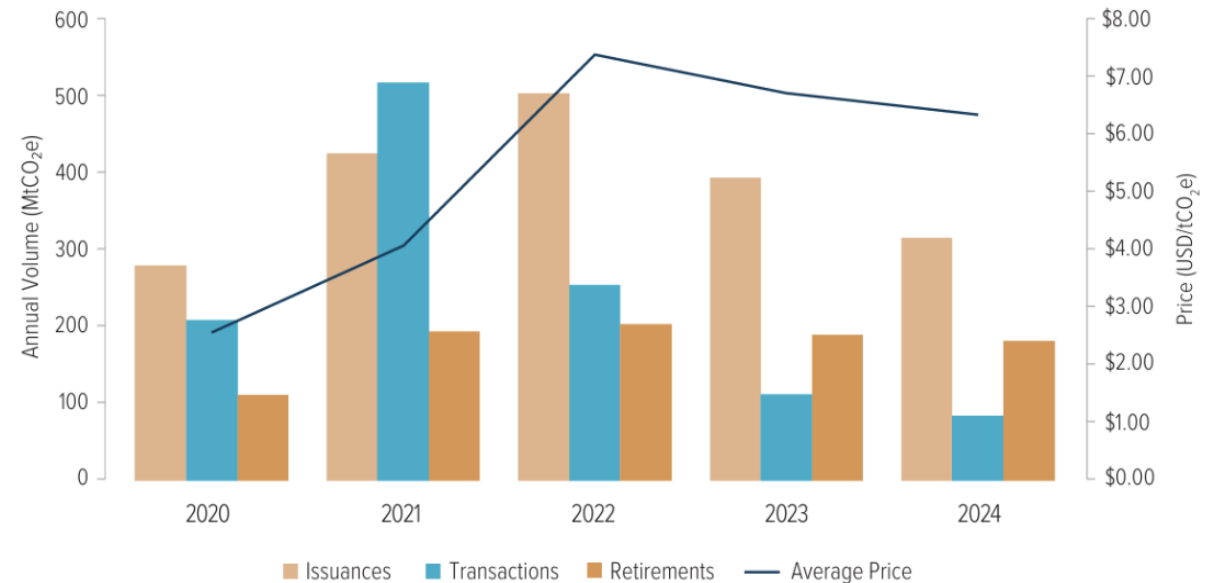
***Derisking projects is vital.***

# 1 Carbon credit demand and pricing has shifted

It is a difficult time to enter carbon markets.

Demand from buyers for **carbon avoidance credits** (the type of credits sold by most LMDs generating carbon revenue) has declined and the prices for avoidance credits are often lower than other types of carbon credits.

Overview of voluntary carbon market issuance, transactions, retirements, and average price (2020-24)

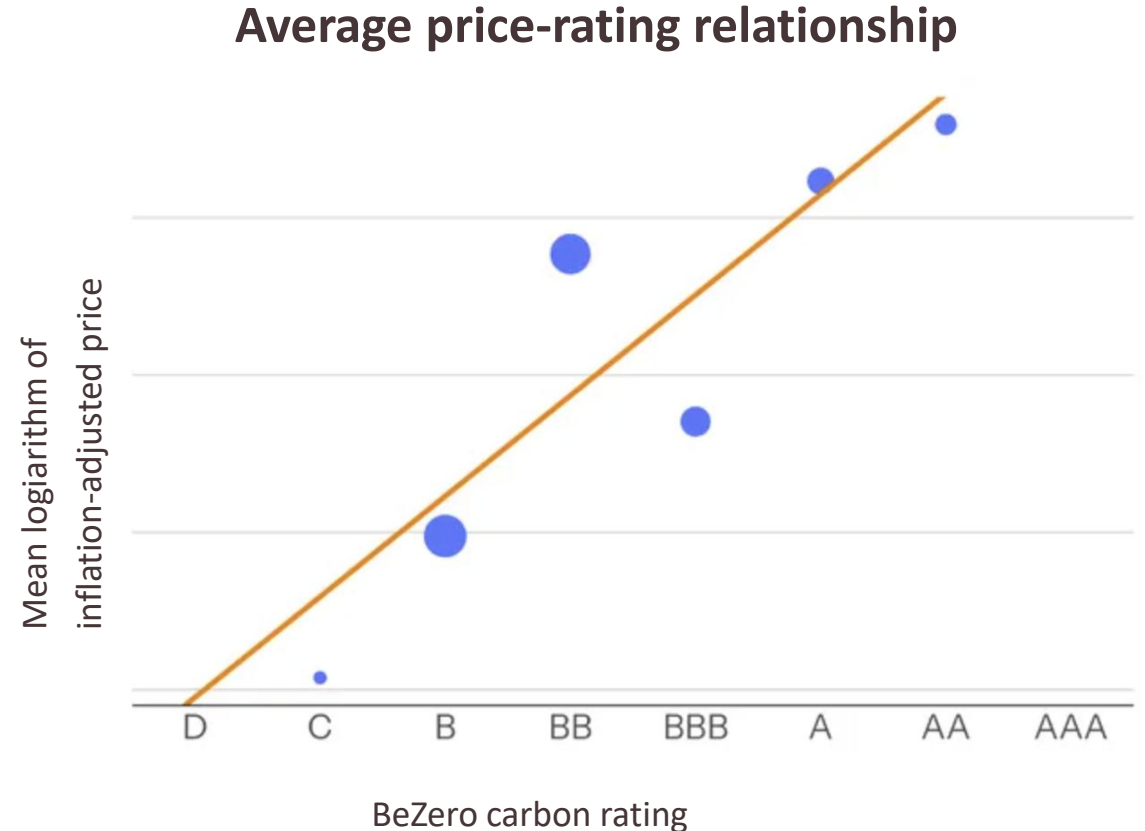


Note: This figure includes data on credit issuances and retirements from American Carbon Registry (ACR), Architecture for REDD+ Transactions (ART), BioCarbon, Climate Action Reserve (CAR), Clean Development Mechanism (CDM), Carcarbono, Global Carbon Council, Gold Standard, Plan Vivo, and Verified Carbon Standards (VCS) registries. Transaction volume and average price data are sourced from actual transaction data provided by EM's Respondents. **Source: EM SOVCM Report**

## 2 Carbon buyers demand high quality and integrity credits

Carbon credit buyers are **highly discerning** and shifting their focus towards higher-quality, verifiable credits.

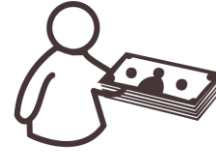
High quality carbon credits – those using conservative baselines, up to date methodologies, robust monitoring and verification, and low reversal risk —consistently command higher prices.



### 3 LMDs need to decide where to sell carbon credits

LMDs establishing a carbon project need to decide whether to sell credits in the **voluntary carbon market (VCM)** or **compliance markets**.

Credits may fetch higher prices in compliance markets, but voluntary markets are more accessible.



#### The Voluntary Carbon Market (VCM)

Decentralised international markets which allow corporates and individuals to buy credits to meet climate goals



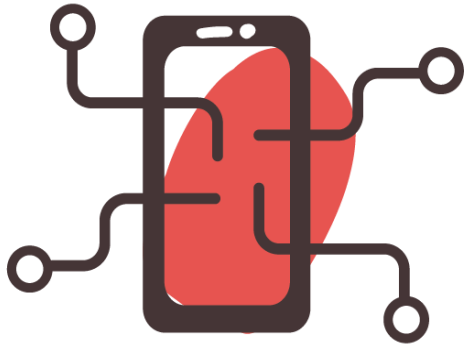
#### Compliance Markets

Carbon taxes and emissions trading

CORSIA

Trading credits to meet NDCs

## 4 Technology and scale are top feasibility considerations



### dMRV

Devices fitted with reliable digital measuring reporting and verification (dMRV) technology can be an important enabler.

The technology (e.g., cookstoves vs. solar) and the associated methodologies used in a carbon project affect both the carbon credit price and yield, ultimately determining the project's viability.

LMDs must be operating at sufficient scale, otherwise they will not generate enough credits to cover the high set-up costs. Depending on the technology, "scale" could mean 30,000 to 100,000 units sold per year.

## 5 Project country is also critical to feasibility assessment

Government positions are **changing** with increased oversight and regulation e.g. Kenya. It is important to be up-to-date.

In addition, **government fees** are increasing carbon project costs and reducing margins, making it increasingly difficult for project developers to make a return on their investment.

### Types of government fees

Additional taxes

Registration fees

Project review fees

Benefit sharing arrangements

Corresponding adjustment fees

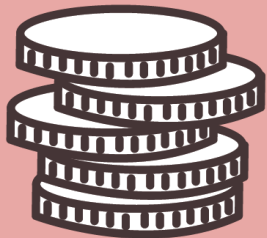
Share of revenue or credits

# What GDC members told us

Additionality, not  
the cherry on top!



Carbon finance may enhance **profitability** and **growth** for distribution companies...



**but**

... Setting up carbon projects involves **high costs** and **high effort**.

# The costs are high



GDC member POV

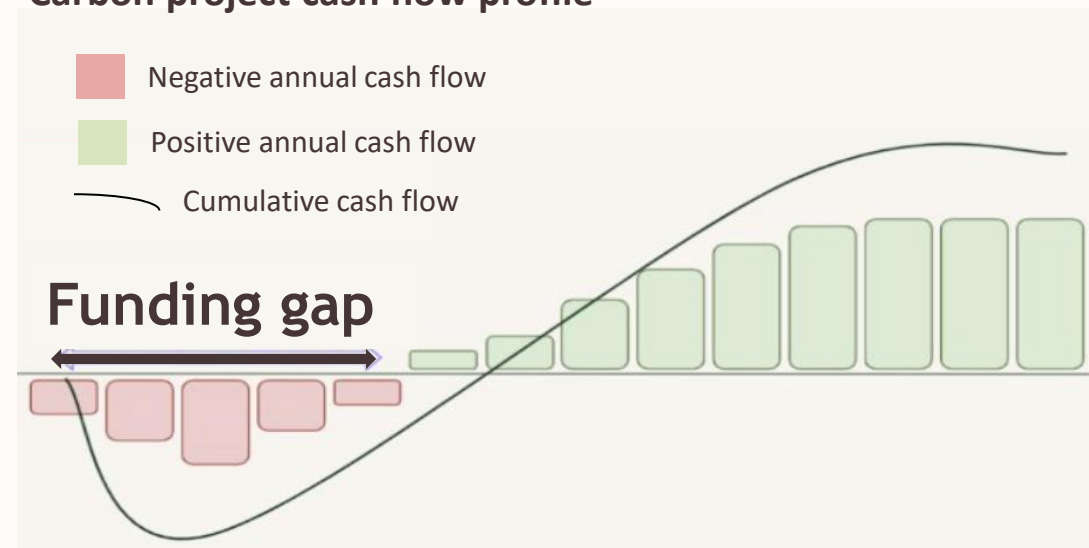
The challenge for most carbon project developers is the costs are high and the returns come later in the project.

## Cost estimates of setting up and maintaining a carbon project

Cost type	Lower End	Upper End
One off set up costs	\$173,500	\$378,000
Ongoing (once per cycle, e.g. year)	\$52,000	\$155,000
<b>Estimated total cost over project duration</b>	<b>\$329,500</b>	<b>\$843,000</b>

Source GDC 2026

## Carbon project cash flow profile



# De-risking is vital



GDC member POV

LMDs should aim to **de-risk** their carbon projects by doing as much research as they can.

- Complete **pre-feasibility** studies before investing time and resources.
- **Speak to other** carbon project developers who sell similar products.
- Get in touch with **industry associations** and umbrella groups.
- Get up to date information on **sector trends** using Abatable, Sylvera and BeZero.
- Make sure you **understand the fundamentals** of setting up a carbon project.

# Top tips from GDC members



GDC member POV

## Capital

Ensure you have money to invest in the upfront costs. Ensure your capital is patient, as it may take more than two years to generate revenue.

## Scale

Ensure your project is of sufficient scale to generate enough credits to justify hefty upfront costs. The scale depends on the baseline emissions and removals calculations, but you will likely need to sell 30k units – if not 100k units.

## Negative PR

Avoid negative PR risk by using up-to-date methodologies, using conservative baselines, and setting up proper monitoring and verification.

## Customer data

Start by getting your customer data and systems in order.



Credit: Sistema.bio

# Top tips from GDC members



GDC member POV

## Regulation

Understand carbon policy and regulation in your country of operation.

## Secure a buyer

Confirm market demand upfront by getting a buyer for your credits early, to significantly de-risk the project.

## Tell the story

Build a narrative, including co-benefits – gender, health, economic growth - can help to differentiate your credits in the market

## Expert support

Work with experienced consultants but beware of unqualified advisors.



-Credit: Practical Action

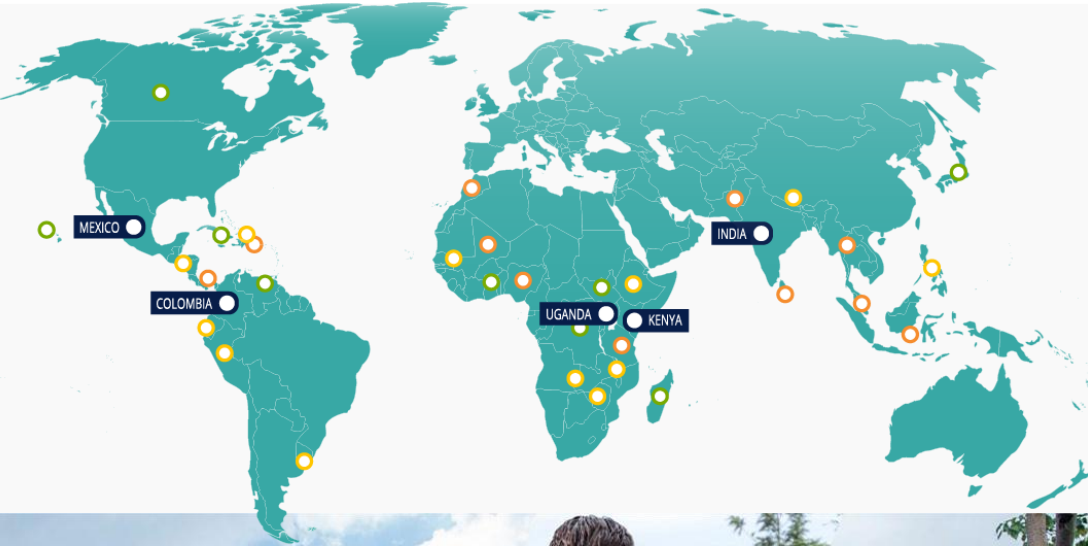
# **Intros: Sistema.bio and SPOUTS International**



A close-up photograph of a person's hands holding a small green plant seedling in a field. The person is wearing a teal shirt and grey pants. The background shows a drip irrigation system with black tubes and small red emitters in the soil. The overall scene is outdoors with natural lighting.

 SISTEMA.bio<sup>®</sup>

# Sistema.bio: 15 years working with farmers to build the farms of the future



Sistema.bio has the potential to **bring clean energy and regenerative agriculture** to 100 million farmers across 15% of the world’s farmland—driving the decarbonization of agriculture and food industry supply chains.

**Our Mission:** Work with farmers to improve life on Earth

Our biogas products and services are the best in the industry and provide real, proven value to farmers at scale. Our model, capacity and reach position the company for significant growth.



## Our Impact to date



**+150K**  
digesters  
installed



**+1.3M**  
CO<sub>2</sub>e  
mitigated



**35**  
countries



**4**  
Regional Hubs



**Crossing**  
**1 million**  
people  
Worldwide  
by 2025

*\*Impact reached to Q4-2024. Cumulative figures since 2010*



## Sistema.bio's core Biodigester technology

Reliable, modern energy and infrastructure built for the future of farming.



**Farmer-Friendly Operation and Maintenance**



**Modular**



**Variety of Sizes**



**Durability**



**Streamlined installation**



**10-year warranty**

# Sistema.bio climate solutions stand out because:

## Boots on the Ground

Rolling up our sleeves and getting our feet dirty is at the heart of what we do.

Our vertical integration ensures quality results — from **certified technicians** who provide training and support to farmers, to **skilled engineers** finding marginal product & process improvements, to **carbon market experts** navigating evolving regulations and implementing projects in line with global best practices.

This **hands-on approach** drives measurable impact and technical accuracy, and builds trust at every step.



## Technical Accuracy

Our world-class, in-house **digital MRV** system combines advanced flow sensors with a cutting-edge platform for real-time monitoring & data integration.



InclusiveEnergy

**Venting & Leakage Prevention Technology** is integrated in all our biodigester solutions, enhancing system reliability and GHG integrity by auto-flaring excess methane, going beyond Gold Standard Requirements.

With a **conservative methodology, individual farm baseline assessments & direct farmer relationships**, we go above and beyond standard requirements to deliver accurate, transparent, and verifiable results.



Gold Standard



## Equitable Use of Funds

We practice extreme additionality: carbon finance gives farmers the upfront subsidy (up to 80%) required to solve the affordability gap.

Our targeted approach supports proper fund allocation, directing **resources where they are needed most—directly to farmers.**

FarmCarbon provides a pre-financing facility **that accelerates impact** by getting projects ready-to-scale.

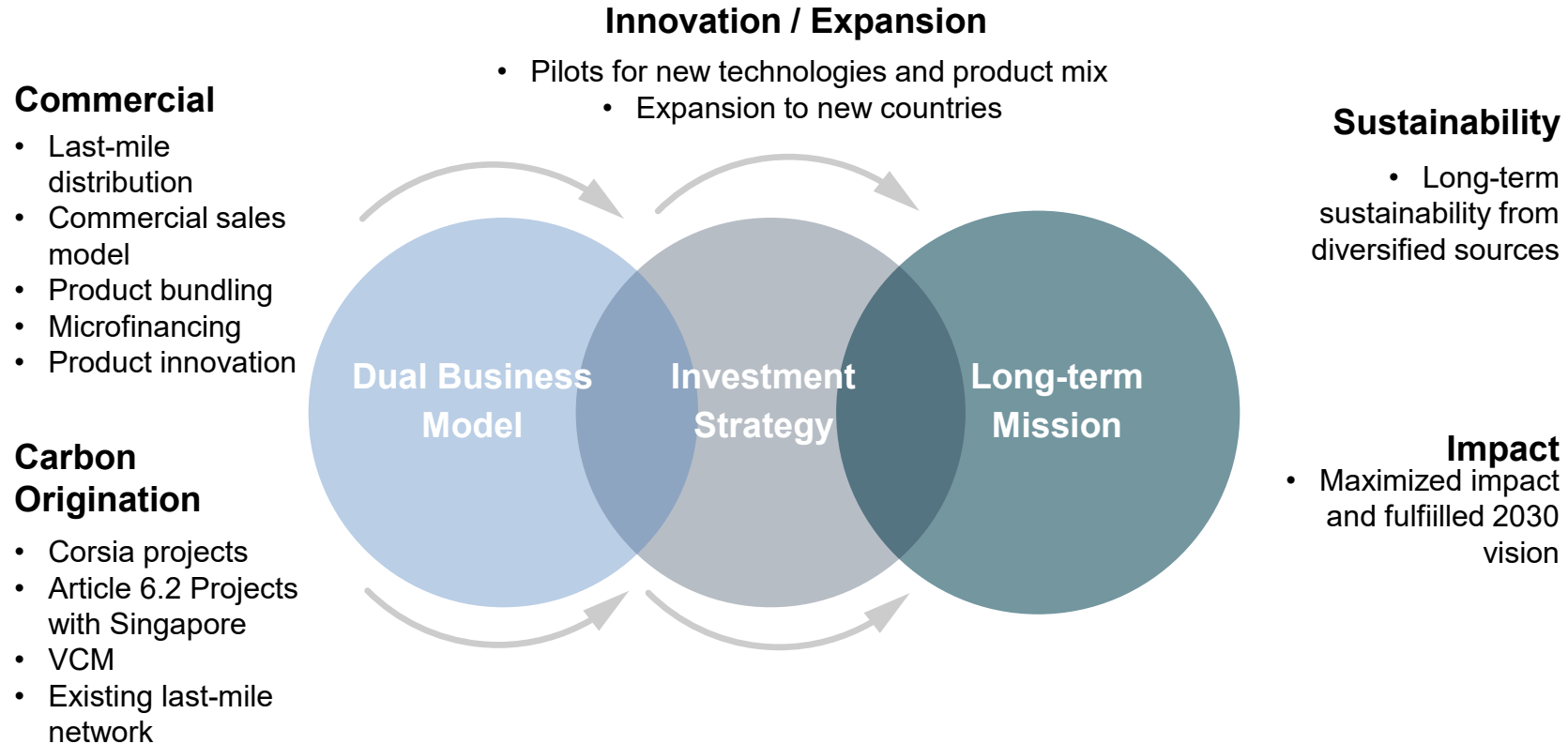




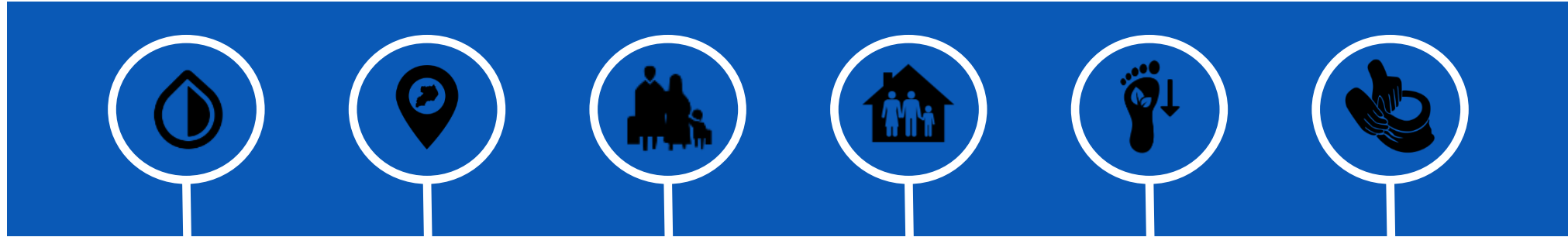
**SPOUTS of Water**  
**Overview**

**SPOUTS**  
OF WATER

# Our business model blends commercial and carbon operations to maximize impact



# Despite bootstrapping for most of our journey, we have achieved significant impact and traction



**350k+**  
filters sold

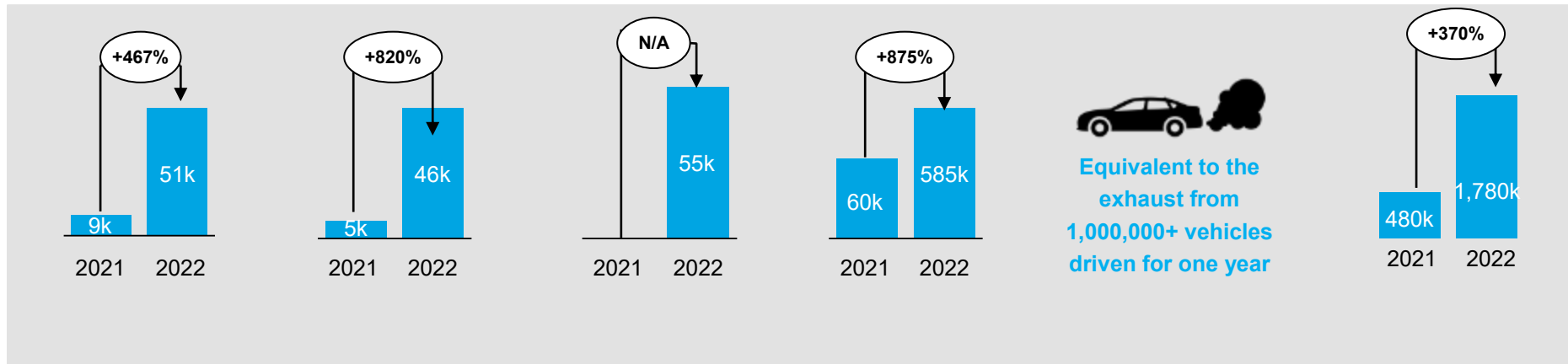
**150k+**  
B2B filter sales

**200k+**  
cookstove  
installations

**2m+**  
people impacted

**1.5M+**  
tons CO<sub>2</sub>  
reduction

**\$4.6M**  
2025 revenue



**Q&A**



# Wrap up and next steps

- Your **feedback**
- **Follow ups:** Slides, recording, and speaker contact details
- Stay tuned for the **report** coming very soon!
- Next **GDC webinar** in May/June on paths to profitability for LMDs

