

THE PERMANENT SOLUTION

Permanent. Carbon. Sequestration.

We are an Indian Climate Tech company with an aim to permanently improve soil health & productivity, whilst permanently sequestering atmospheric carbon.

THE FIRST PROBLEM



1

Have you thought about soil before?

The very essence of life on earth.

THE CLOCK IS TICKING — BUT WE REFUSE TO GIVE UP.

- All of our soils that are under chemical conventional agriculture are almost completely devoid of microorganisms.
 - Since the significant increase in population as well as agricultural production in the 1970s, we have lost one third of the Earth's topsoil.
 - In turn damaged soil, releases water and Carbon Dioxide back in the atmosphere- creating arid, desertified soils and an ever warming planet.
 - By 2050, it is estimated that one billion people will be refugees of soil desertification.
 - According to the UN, the world's remaining topsoil will be gone within 60 years.
-

To cure our climate,
we need to cure our soil.

THE SECOND PROBLEM



BIOMASS IS A RESOURCE AND NOT A WASTE.

- If solid waste is not treated properly, it could negatively impact the environment as the global accumulation of agricultural waste is around 2 billion tons in a year, forest waste about 0.2 billion tons, municipal waste for about 1.7 billion tons and industrial waste about 9.1 billion tons.
- Due to abundant agricultural, municipal, and forest biomass burning – a large amount of CO₂ and methane are released in the atmosphere as well as our water sources.

To cure our climate,
we need to manage our waste

THE THIRD PROBLEM



10 Billion Tonnes

of CO₂ need to be removed from the atmosphere each year by **2050**

↓ to stay below

1.5° Celsius

of warming

↗ The **carbon removal market** must scale by

14,000x

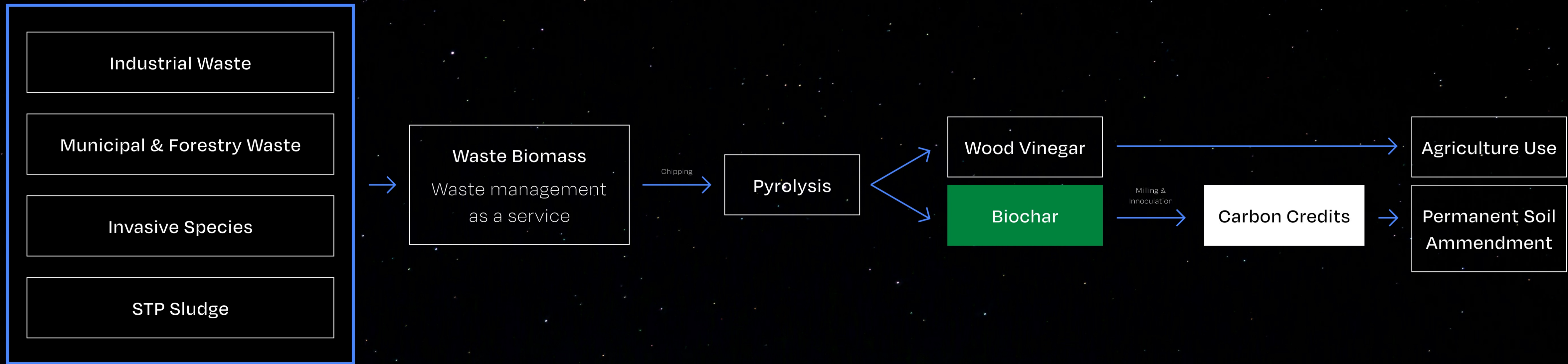
in the next **26 years**

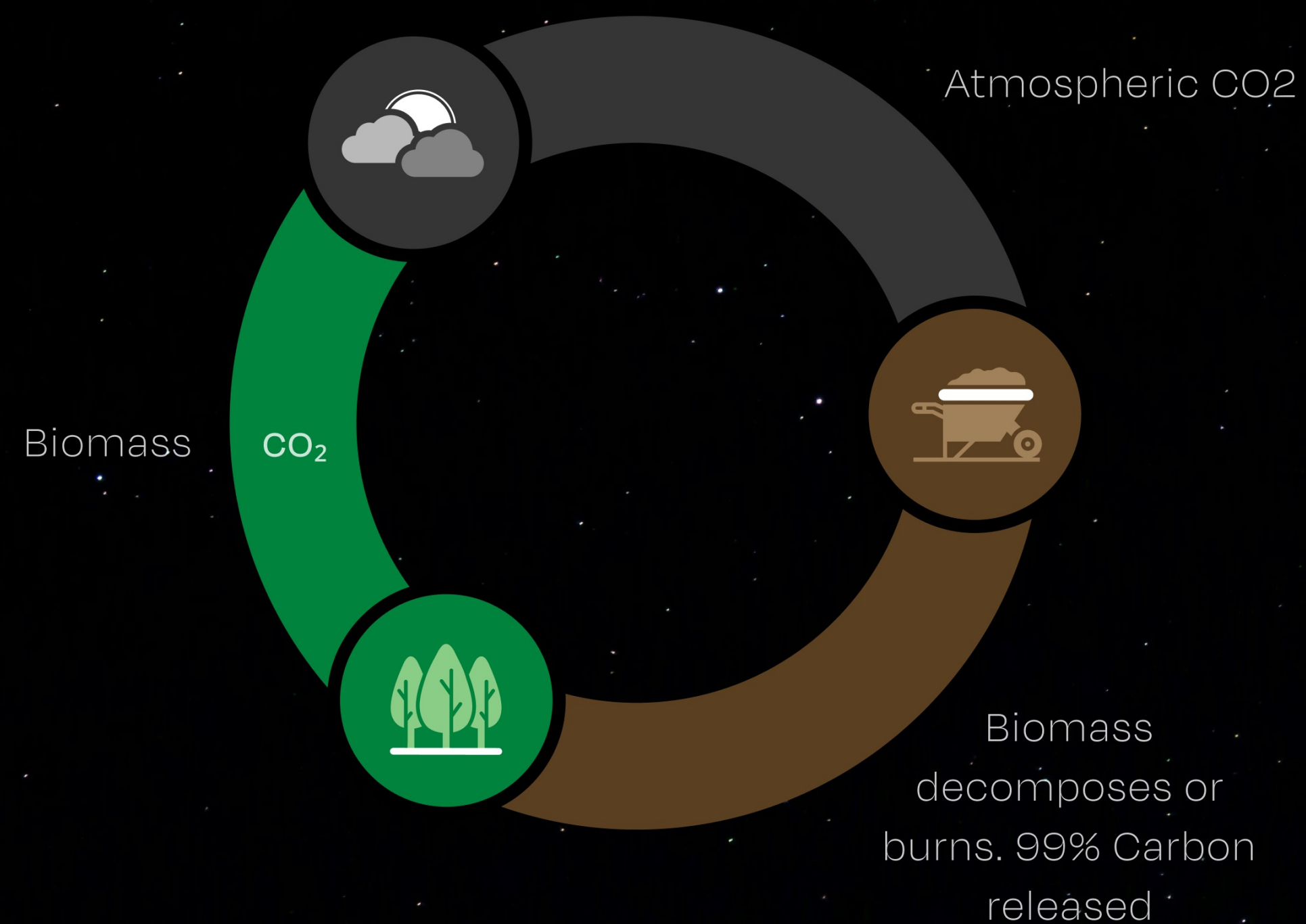


THE PERMANENT SOLUTION

**BIOMASS WASTE MANAGEMENT. SOIL HEALTH
ENHANCEMENT. CARBON SEQUESTRATION.**

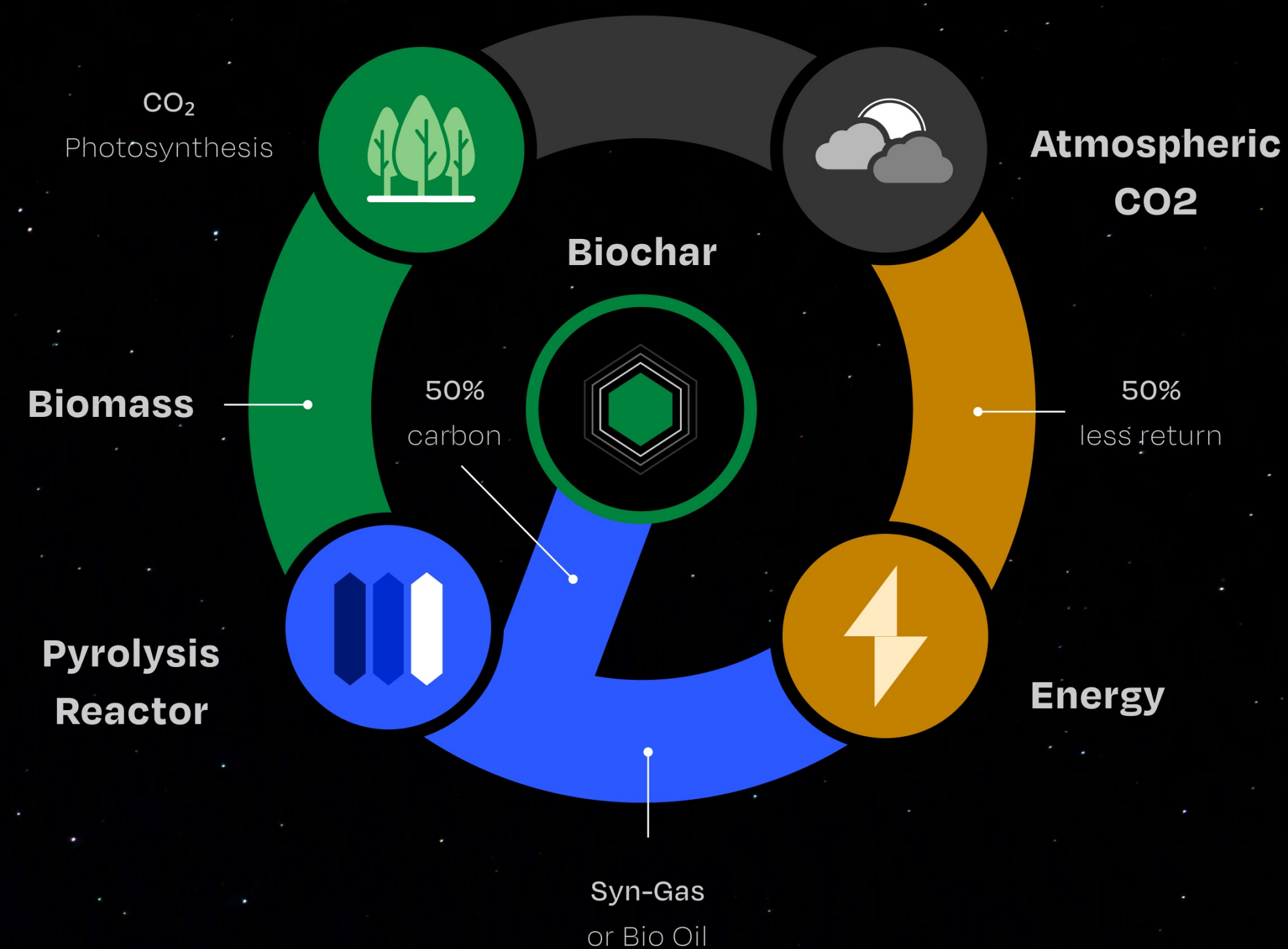
The Permanent Solution





Natural Cycle

All the carbon returns to the air



Carbon Cycle

Upto 50% sequestered

Biochar

Biochar is produced when plant matter (leaves, trunks, roots), manure, or other organic material or biomass waste is heated in a zero- or low-oxygen environment. The carbon that the organic material had previously absorbed via photosynthesis is thus captured in solid form; the resulting biochar can take the shape of sticks, pellets, or dust.

- **Biochar significantly reduces water and fertilizer use whilst boosting agriculture productivity in soil**
-

Biochar is the most accessible permanent engineered carbon removal method today.

It was first discovered 2500 years ago, in the Amazonian Basin.



Biochar

1 Ton

of Biochar

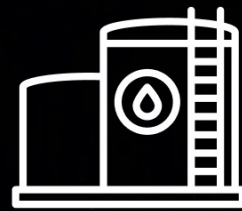
=

2.5 Tons

of CO2 offseted



Enhanced soil structure



Increased water retention & aggregation



Filtration of contaminated water



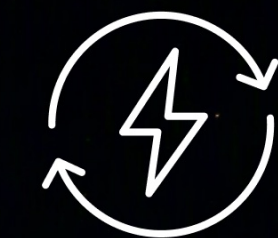
Reduced nitrous oxide emissions



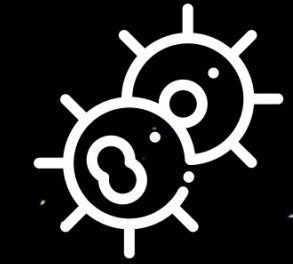
Improved porosity



Regulated nitrogen leaching



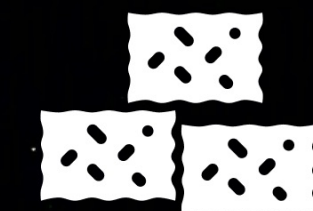
Improved electrical conductivity



Improved microbial properties



Increased crop productivity



Improved cattle feed

Biochar Market

USD 184.9 Million

in 2023



USD 450.8 Million

by 2030

11.3%

CAGR during forecast period

i. Awareness towards net zero goals

ii. Easy availability of biomass sources

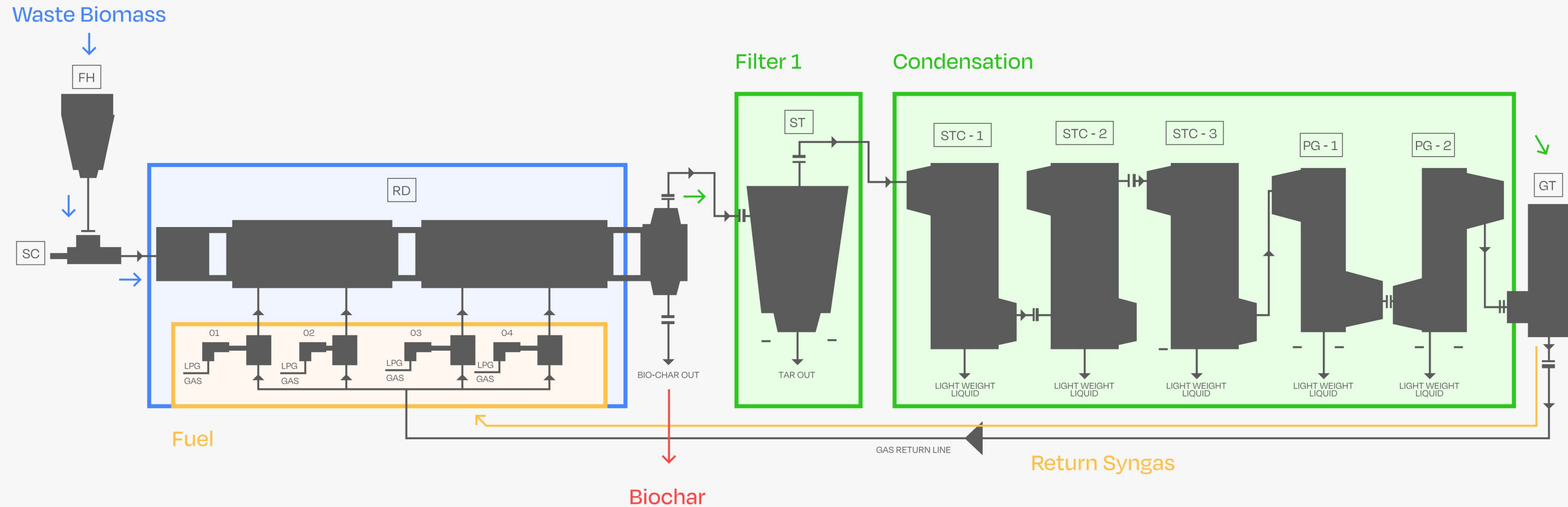
iii. Relatively non complicated technology

iv. Lower production cost

v. Demand for climate relevant agriculture



Our CEO, Sahir at Banni studying the impact of waste mismanagement



— We are in the process of acquiring a high tech equipment to scale our production of biochar.

Waste biomass(150kg/hour) goes in the feed, goes in the pyrolysis reactor which is fuelled by LPG and temperature of 750 degree Celsius, 50kg/hour biochar is out. Bio oil and other liquids go through a filtration process and condensation process and the remaining gas is directed back in the pyrolysis reactor to maintain efficiency and reduce toxic emissions

PROCESS

Pyrolysis

Biomass pyrolysis refers to the process of incomplete thermal degradation of biomass feedstock (contents of C, H, and O) into Biochar, condensable liquids (bio-oil) and noncondensable gases. These gases can be retorted back into the process to increase efficiency and significantly reduce greenhouse emissions.

Continuous Pyrolysis Reactor

125kg / hr input

Inbuilt crushing & milling unit

High tech solution

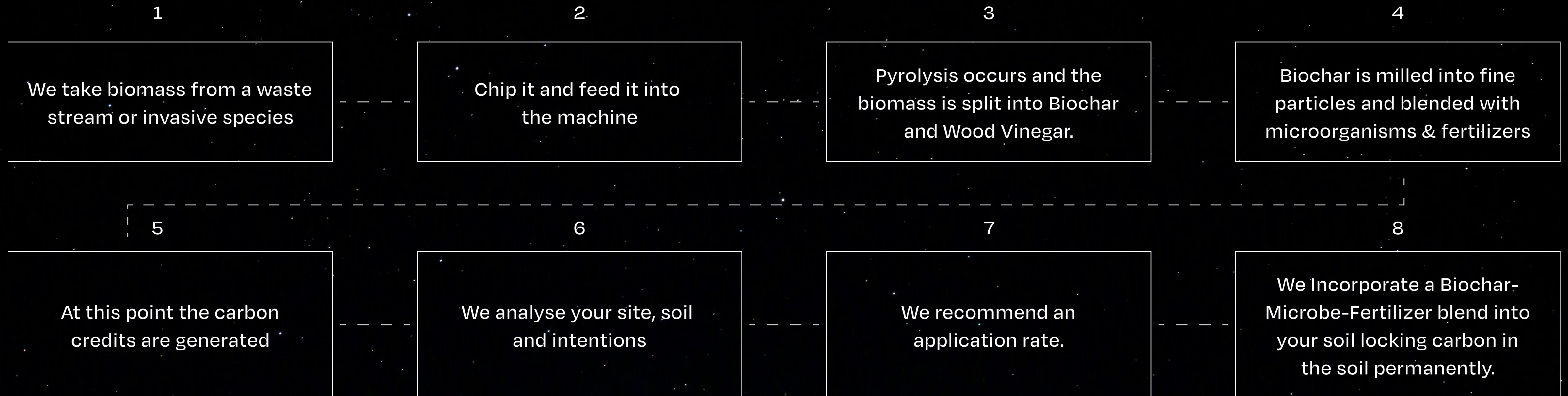


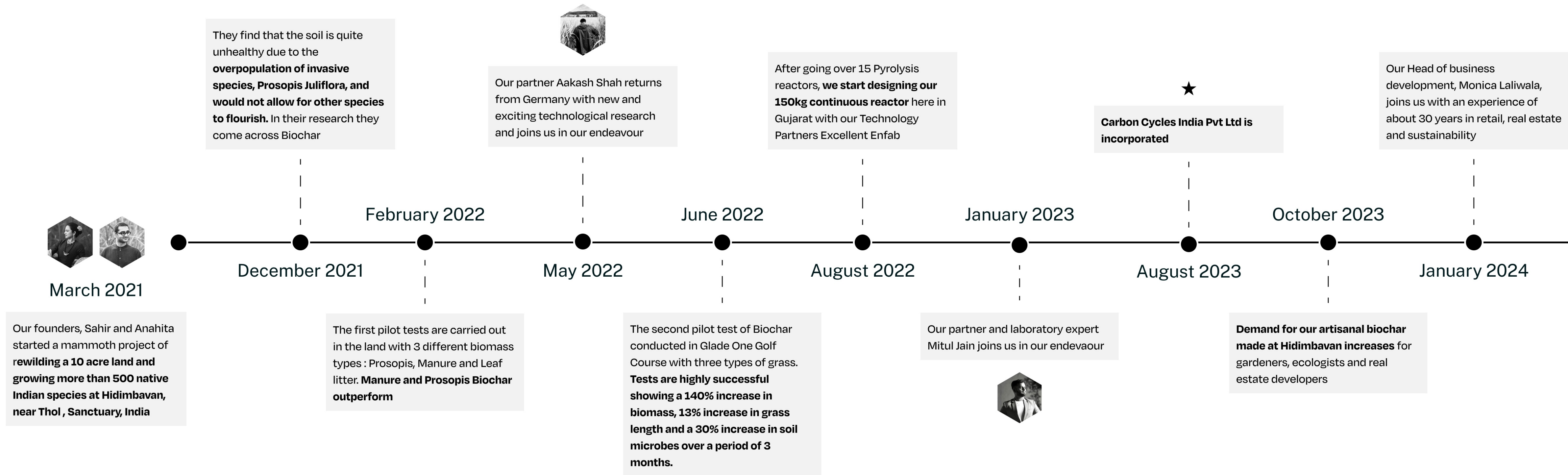
All environmental compliances
taken care of

7 Tons
of biochar produced every week

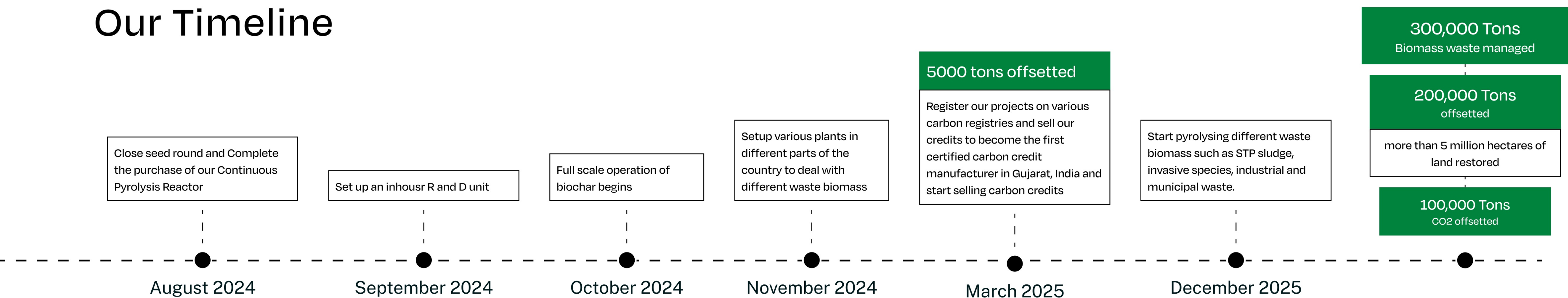
Temperature up to 450
degree Celsius

An 8 step solution to healthy soils



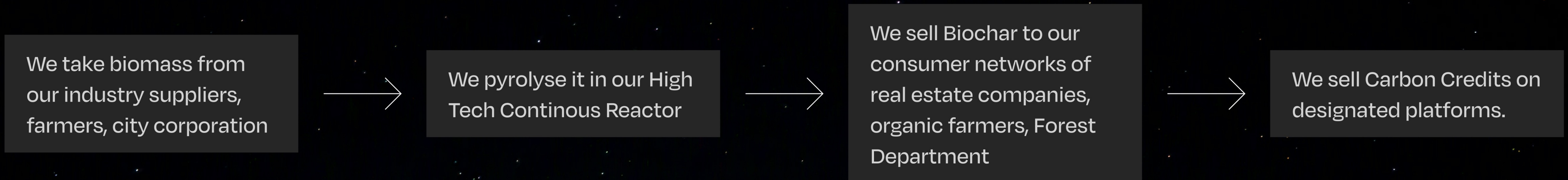


Our Timeline



Business Model

B2B as well as B2C Production as well as expert services with direct consumer visibility and focus on high quality and competitively priced biochar as well as reliable carbon credits.



WHY CARBON CYCLES?

Expertise

A team of researchers, field experts, ecologists, laboratory service providers all geared towards making your soil healthy.

Transparency

We aim to provide you the most reliable carbon credits available in India that will clear all relevant MRV compliances.

One. Permanent. Solution.

We'll not try to sell you biochar again. As it's a one time permanent amendment for your soil and the carbon is locked forever.

Client Experience

We have already experimented with biochar in golf courses, private estates as well as ecologically sensitive zones with outstanding results.

Rapidly Scalable

Using our high tech solution, we aim to sequester over 3000 tons of Carbon every year.



This is a simple story of a solution- to heal our planet. In fact the solution is right under your feet. **We call it SOIL, EARTH AND GROUND.** Because of its unmeasurable scale and its ability to sequester immense quantities of greenhouse gases, **it could be just the one thing that can balance our climate, replenish our supplies and feed the world.**

In a handful of healthy soil, there are more
number of microorganisms than humans
that have ever lived on Planet Earth.

The Team



Anahita Brahmbhatt

Founder & Managing
Director



Sahir Patel

Founder & Chief
Executive Officer



Monica Laliwala

Head of Business
Development



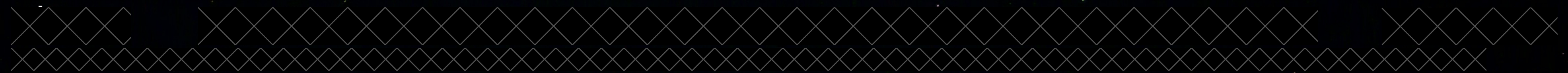
Mitul Jain

Compliance Director
& ESG Specialist



Aakash Shah

Chief Technology
Officer



Thank You