



Rapid Carbon Conversion & Locking Solution



# Regenerative Carbon Capture & Storage

Introducing an efficient and environmentally beneficial solution for permanent carbon storage using green waste & biological principles.



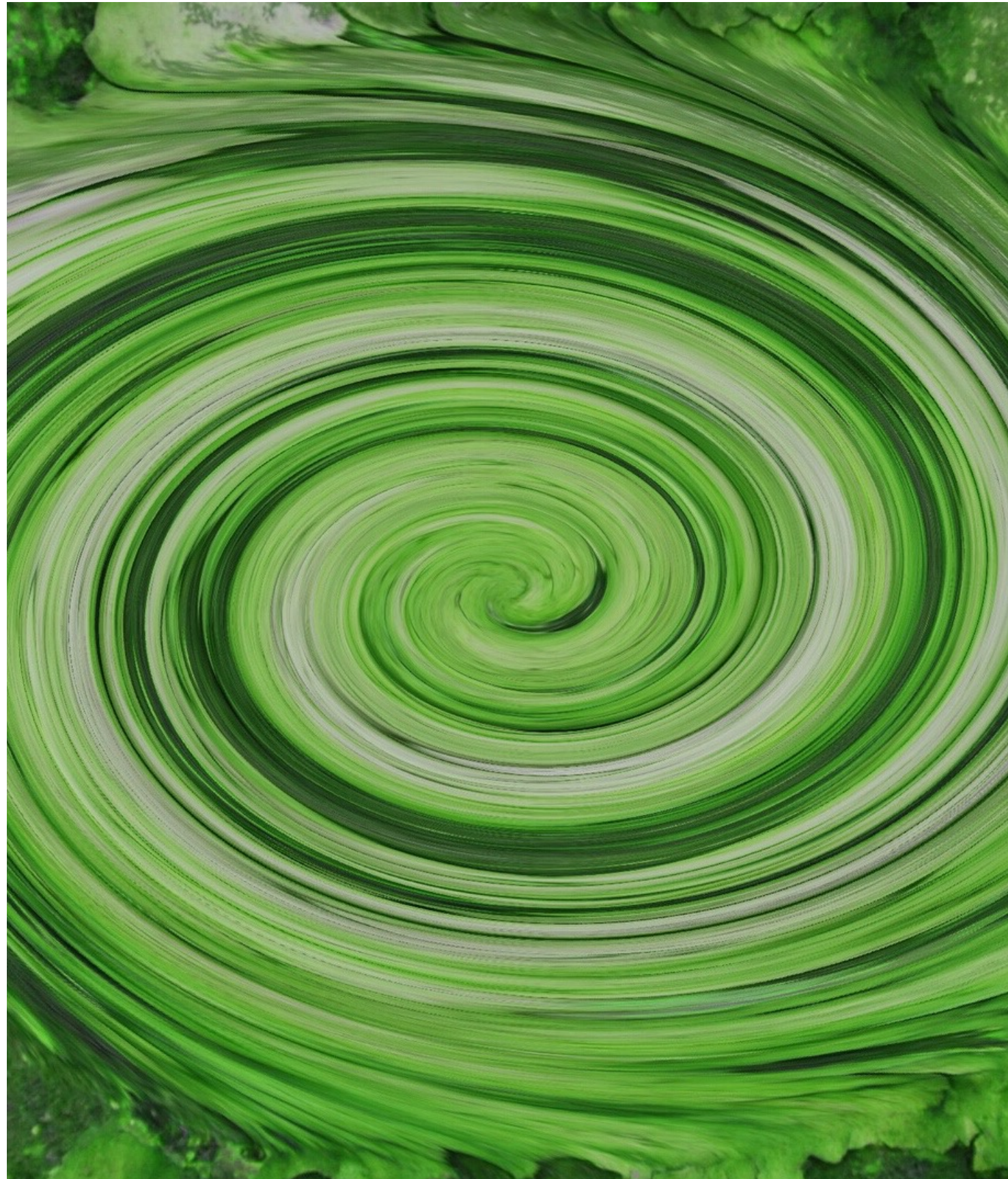
Innovative alternate composting technology uses hyper-triggered microorganisms to exponentially accelerate the breakdown of organic waste



Hyper-processing in anaerobic conditions converts raw materials into a stable form for long-term carbon storage and greenhouse gas prevention.

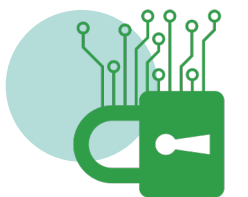






**RCC selectively integrates only the best elements from trusted green waste conversion systems.**

**Then we send the whole process into hyper-drive.**





# Composting

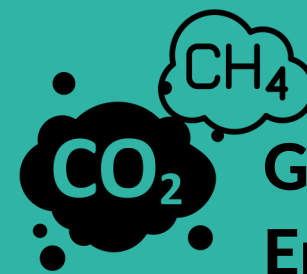


Unlike [traditional composting](#), with RCC, scraps of all kinds – including meat and dairy products banned from aerobic systems - are inoculated and sealed for conversion.



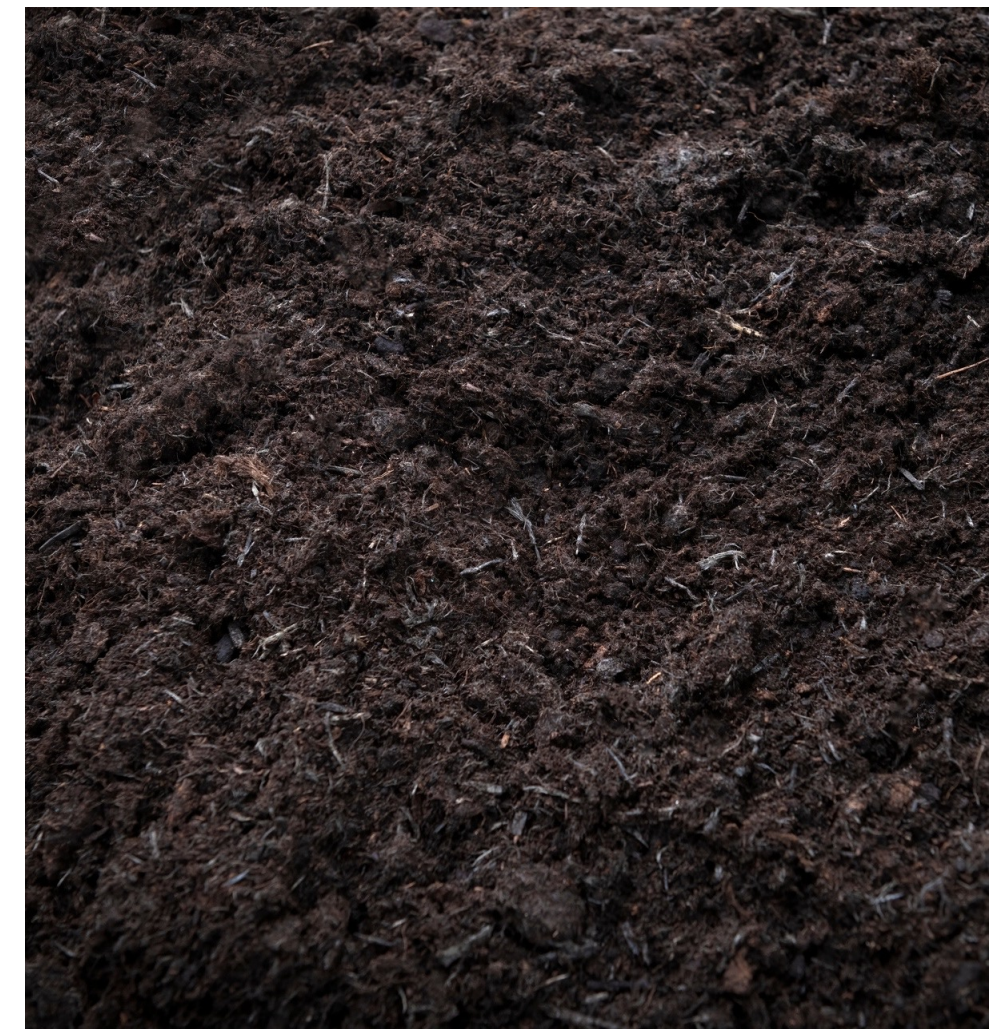
## Conversion through Decomposition

Microorganisms slowly break down organic matter through aerobic composting.



## Greenhouse Gas Emmissions

Carbon Dioxide & methane are released back into the atmosphere as the green waste is broken down.





# RCC vs Composting

## RCC

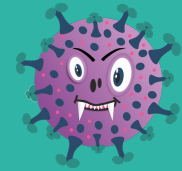
- Fermentation & Conversion
- Anaerobic
- **No CO<sub>2</sub> or Methane Emissions**
- Conversion in 2 weeks
- 3% loss of weight
- Carbon-to-Nitrogen ratio = 19:5\*

## Composting

- Decomposition
- Aerobic
- Emits CO<sub>2</sub> and Methane
- Can take up to a year
- 60% loss of weight
- Carbon-to-Nitrogen ratio = 10:1\*

*\* Independent trial conducted by Feed Innovation Services Research Center, Wageningen, Netherlands*





### **Super-triggered Microbes**

RCC utilizes specially cultivated microorganisms, unique to each region, that are triggered for hyperpopulation and aggression.



### **Reverse the Order**

RCC prevents mass, nutrient & and carbon loss by hyper-preserving green waste in an environment absent of oxygen.

# **Conversion through Modified Zymology**



# Perfect Combination

RCC utilizes accelerated fermentation science to completely convert green waste to stabilized biomass. Mass is **preserved**, Carbon is **trapped**, and off-gassing is **prevented**



Biomass is anaerobically hyper-metabolized in just two weeks. **No CO<sub>2</sub> or methane is produced** during the process.



Nutrient rich, **stabilized biomass** is formed high levels of fixed carbon. Starting and ending mass is nearly identical.



Stabilized biomass remains sealed and monitored to ensure **no off-gassing** of CO<sub>2</sub> or methane occurs, resulting in high carbon credit value.







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## Harvest Microbes

1

Regionally specific, indigenous microbes are harvested from local processing site & cultured for growth.



## Trigger Microbes

2

Microbes are grown in specially engineered growth chambers & triggered to not only hyper-populate but to be extremely aggressive.

# Phase I: Microbial Prep Step by Step

RCC microorganisms are custom grown & contained using proprietary tank materials, catalyst technology & nutritional inputs.

RCC microbes are **VORACIOUS**.



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### Establish Local Reserve

3

A concentrated microbial starter pack is shipped to production site along with biofactor (food) to establish healthy supply of ongoing microbes.



### Ready Grounds & Materials

4

Site is prepared with according to RCC project plan to meet specifications.

## Phase II: Site Prep Step by Step

An RCC Project Plan will be created for each site which in addition to operational SOPs, includes detailed instructions on site preparation and material acquisition.



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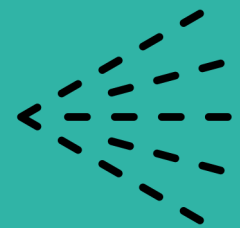




### Site Audit

3

A site auditor will inspect the site, materials and containment methods to ensure required specifications are met. Once approval is issued, it's time to start!



### Drench & Pack

4

Chipped biomass is drenched with water & microbe solution and packed into a variety of air-tight storage enclosures.

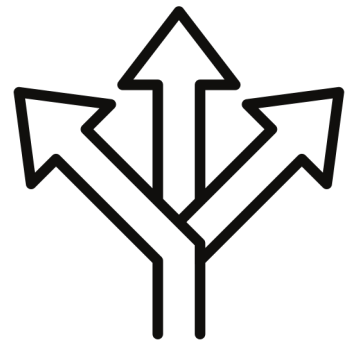
## Phase III: Approve & Start Step by Step

Once enclosed, organic carbon is metabolized and preserved without producing or releasing any greenhouse gases to the environment. No methane is off-gassed during the Carbon Locking Phase. Biomass volume is retained, and after two weeks, project can be verified.



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# Microbial Inoculation & Storage Options

Depending on the facility layout, existing equipment and operational processes, the System can be implemented in a variety of ways. To execute phase I (carbon locking), the microbial solution can be injected into existing waste piles or added during the chipping phase. Inoculated green waste can be anaerobically stored and covered in pits, in piles, or silage sacks. Large existing piles can be compacted with heavy equipment to remove oxygen from the lower layers, allowing for conversion to begin. All methods require sealing in plastic, which can be covered with clay or soil if desired.



Site-Specific Solutions





## Measure & Monitor

5

Routine readings are recorded from monitors placed inside the biomass enclosures to ensure no greenhouse gases are produced or emitted.



## Verify

6

Third party verifiers visit the site periodically to review projects that have stabilized in phase IV. Successful verification results in carbon credit creation.

# Phase IV: Storage & Prevention

Enclosures are maintained and monitored to ensure proper carbon storage and the ongoing prevention of methane and CO2 emissions. Continual readings will be recorded from all enclosures for the life of the project - 100 years!



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# Market Partners

- Existing Municipal Green waste facilities
- Government agency-led disaster clean up
- Corporations interested in carbon offsets







# Supplies Required



Depending on Market partner & size of operation, supplies & labor requirements will vary:

Biomass must be chipped prior to placement in enclosures. Common examples of required supplies are shown below.

## On-site RCC Processing:

- Tractor(s) with loader(s)
- Silage bagger with hopper & conveyor\*
- Microbe tanks
- Liquid tanks with sprayers
- Silage bags or approved plastic liners/covers
- Collection totes for liquid runoff\*
- Excavator
- Trucking access

*\* depending on project & storage method*





# Multi-Faceted Solution



Project funding can be privately obtained or awarded through community, government & corporate grants & programs.



Cleanup, Regenerative Principles, Carbon Storage, Greenhouse Gas Prevention

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The image features a lush green background of out-of-focus leaves. A white rectangular box is centered horizontally and vertically, containing the text "Thank You". The word "Thank" is in white, and "You" is in a bright cyan color.

**Thank You**