

A wide-angle photograph of a mountain valley. The foreground and middle ground are covered in lush green grassy slopes. In the background, rugged, rocky mountain peaks are visible, some with patches of snow. A large, thin white circle is superimposed on the image, framing a central valley. The sky is a clear, pale blue.

carbon8

Selin Murat

Head of Commercial Partnerships

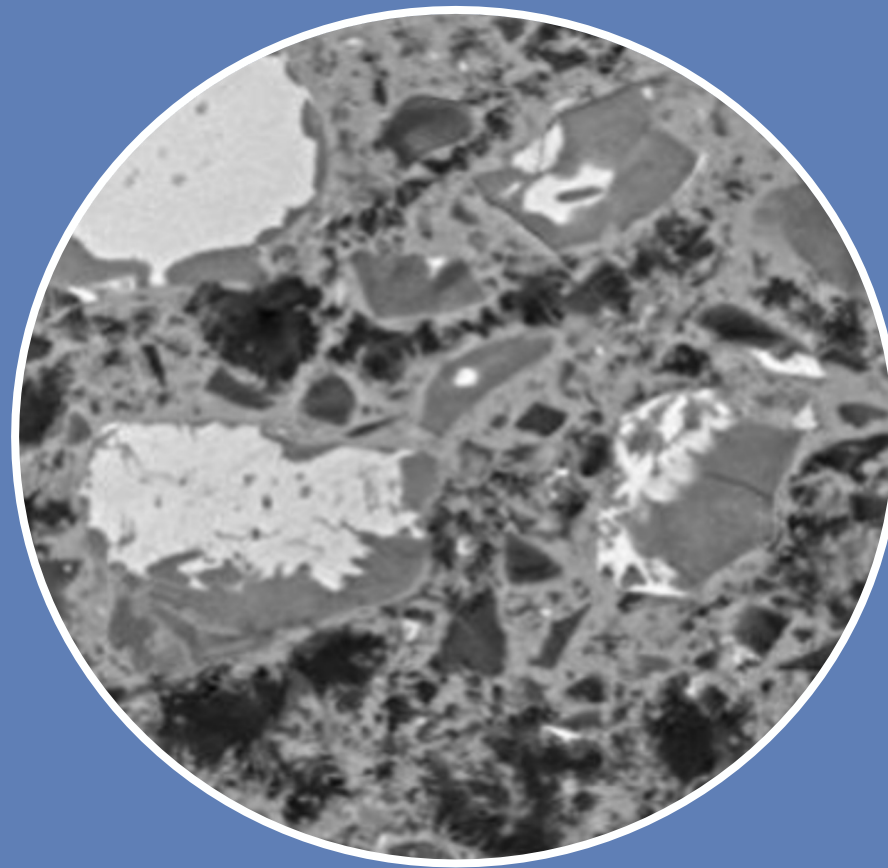
Transforming waste carbon and residues into new links
in a circular value chain. That's more than sustainability.
That's Circular Impact.

Carbon8

A Circular Impact Company

An Overview

Carbon8 converts carbon and residues into sustainable value streams with its TRL 9 technology which permanently captures and utilises CO₂



Accelerated Carbonation Technology:

Patented process transforming industrial waste into products through permanent CO₂ capture



Plug 'n Play solution:

Commercialised technology for heavy industry, deployed with first major customer in July 2020



Sustainable landfilling alternative:

A cost-effective, circular solution to industrial waste



Industry Landscape

Hard-to-abate Industries

Steel

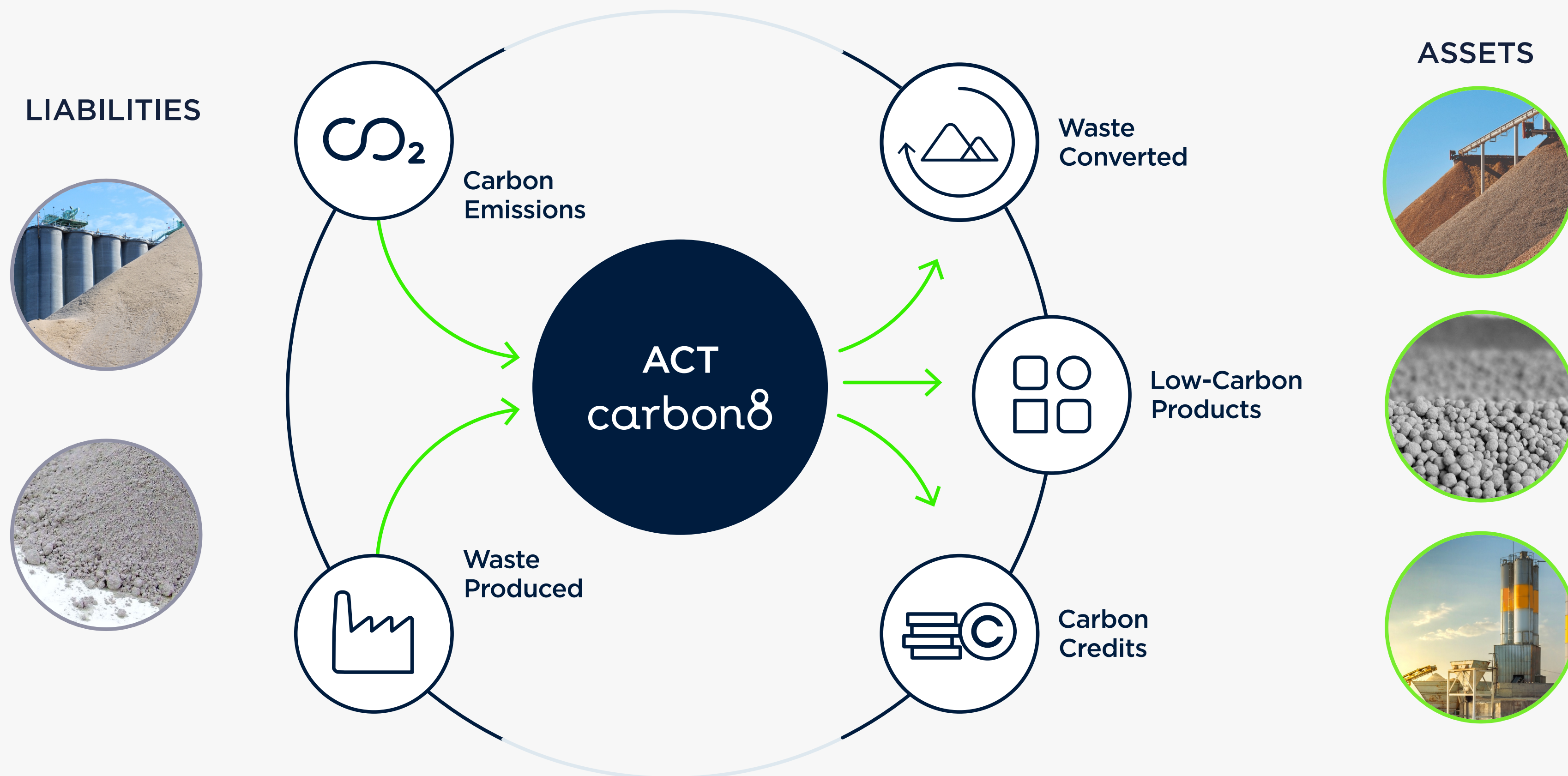
OTHER INDUSTRIES:

- Cement
- Waste to Energy
- Paper and Pulp
- Biomass
- Contaminated soils
- Construction and demolition
- Oil and gas

Enabling Circularity

Addressing the Problem

Enabling a closed-loop system; recycling waste streams through carbon sequestration



Accelerated Carbonation Technology

An Overview

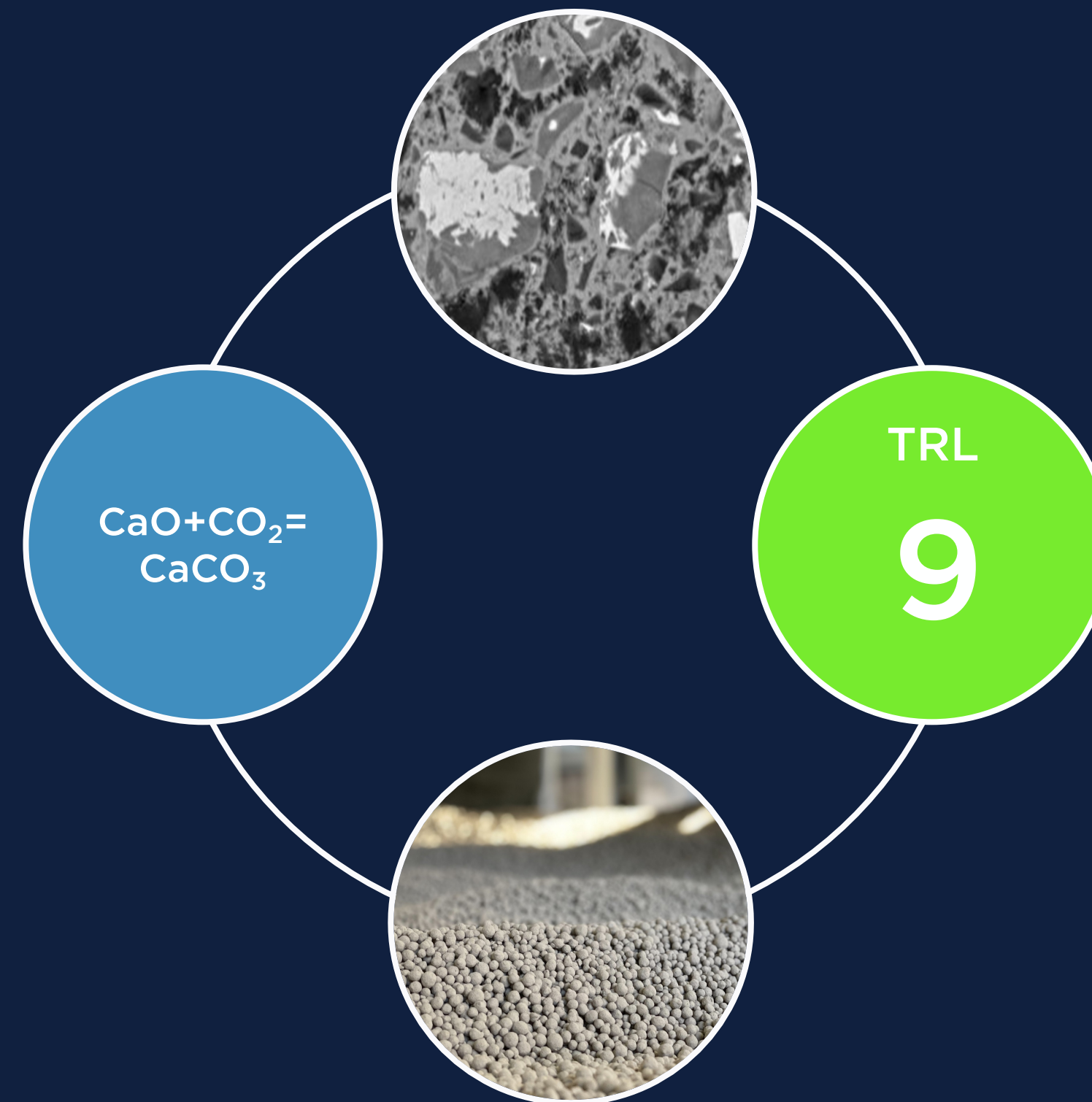
CARBONATION & MINERALISATION

ACT is based on the natural process of mineralisation and carbonation

One of nature's ways of sequestering CO₂

Industrial residues contain calcium and magnesium compounds

Tested +1000 samples and +120 mix designs developed



ACT

Reaction takes 15 – 20 min. rather than years

Metals and contaminants are stabilized in process and pH is reduced

Permanent CO₂ capture, storage and utilisation

Exothermic 'carbon negative' process

CircaBuild

Carbon-negative alternatives to virgin aggregate

Adaptable to client requirements

Applications include concrete blocks, ready-mix and green roofing substrate

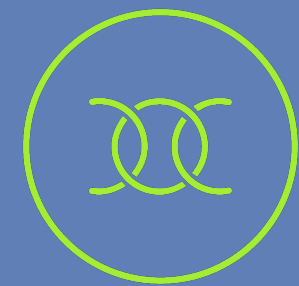
The CO₂ntainer

Main Features



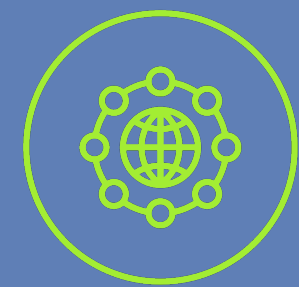
CO₂ CAPTURE

Directly capturing and permanently storing 1,500 - 4,000 tonnes CO₂ per annum



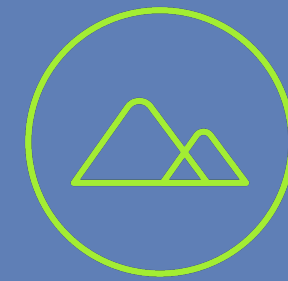
SEAMLESS INTEGRATION

Minimal interference with production



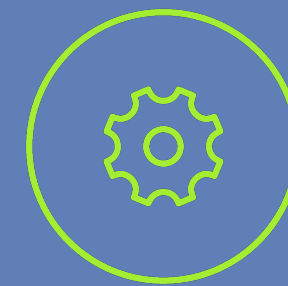
CLOUD CONNECTED

Industry 4.0 capabilities



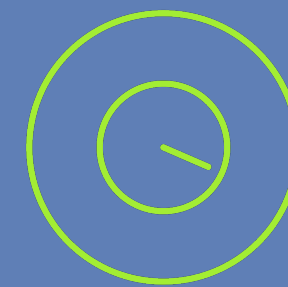
12,000 TONNES

Industrial waste is upcycled per annum into new materials



100% AUTOMATION

Manual and automatic operation possibilities



20 MINUTES

Safety captures and permanently stores CO₂ within 20 minutes

A Modular Solution to Industry Circularity



The CO₂ntainer at Vicat Group's cement plant in Montalieu, France

Circa8 Product Range

Enabling Circularity

Transforming wastes into carbon negative aggregates
through permanent carbon sequestration

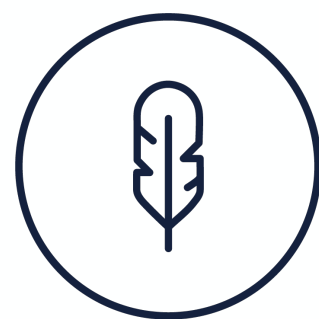
CircaBuild

Applications:

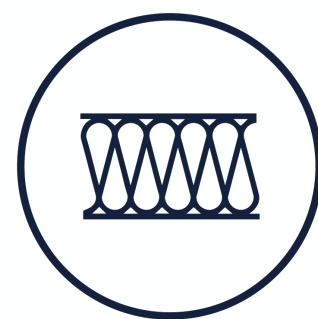
- Concrete blocks
- Ready-mix concrete
- Precast concrete
- Pipe bedding
- Road filler
- Green roofing substrate



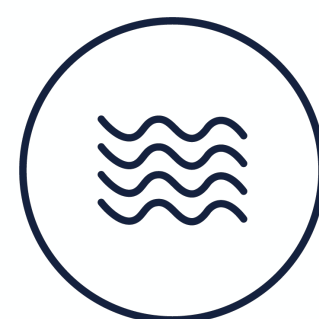
Carbon
Negative



Lightweight



Insulating
Properties



Hygric
Properties



Adaptable to
client needs



The Customer Value Proposition

Economic Carbon Capture and Circularity

A circular solution to industrial waste and CO₂ capture



DIRECT COST SAVING

Divert residues from landfill with sustainable waste management and offset associated costs



CARBON FOOTPRINT REDUCTION

Permanently capture and safely store CO₂ directly from the source



NEW CIRCULAR MATERIALS

Enable circularity through implementing sustainable alternative building materials in production, or market them for a profit

Contact Details

Selin Murat

Head of Commercial Partnerships

selin.murat@carbon8.co.uk

carbon8