VATERIS

Vateris® SOP

Purity redefined

Low carbon SOP delivering superior performance all round

2026

SOP: Sulphate of Potash

From venture to industrial and/or supply chain partnerships

Vateris is industrialising a unique technology across the fertiliser and construction sectors

- Founded in 2021, Vateris has developed a unique carbon capture technology that absorbs CO_2 from flue gas, using gypsum and KOH as feedstocks.
- Our innovative process gives high quality SOP with a low carbon footprint (SOP) along with a co-product Gypcarb® which can directly be used in concrete.
- A team of about 20 FTEs from various sectors (Construction, Fertilisers, Waste to Energy) and backgrounds (Chemistry, Civil, Engineering, Marketing and Manufacturing) based in Nottingham.
- Our pilot plant (170 kg per day SOP capacity) is now operating in Nottingham.
- Products have matched or exceeded market specification, and performance, particularly on the concrete, has been demonstrated through extensive trials globally.
- We are backed by cement/concrete/chemical majors such as Holcim, Goldbeck and Kiilto as investors in Vateris and preparing our next round of investment for a demo plant as a next step towards a full-scale industrial plant.
- While our initial focus has been on the construction industry, we are now actively reaching out to partners from the fertiliser side.

Our SOP product offering

- We are proposing a **high purity SOP product** (>52% K_2O & <0.5% Cl levels) with ~**30% lower carbon** footprint at a market competitive price

How we see a strong partnership opportunity

- Tackling similar challenges (Decarbonisation, Waste to Value Circularity).
- Compatible supply chain and industrial co-location opportunities
- Right timing (pilot stage, pre-industrial scale up).

Possible partnership models

- Venture investment to accelerate the industrial scale up, becoming **an anchor investor/partner from the fertiliser side** as Holcim has been from the construction side.
- **Joint industrial plant co-location**, absorb CO_2 from an existing plant, to produce SOP (as new product thus adding to existing fertilizer capacity) or as a standalone nearby.
- Supply chain partnership to offtake high purity, low carbon SOP.

Ensuring SOP supply continues to meet the demand of a growing market

16 Gt

of CO_2 equivalent are emitted by the agri-food industry as greenhouse gas emissions globally – this is around 30% of all GHC emissions

The global demand for SOP fertiliser is growing at a rate of 3% per year – the water-soluble SOP market at >5%

But will supply be able to keep up?

- ! Very few greenfield SOP projects have made it through to production despite high expectations (E.g. East Africa)
- ! There has been some success in Australia, but this supply is far from Europe
- ! Mannheim SOP producers face a **quadruple** challenge:
    - Rising energy costs to heat their furnaces
    - A structural market shortage of liquid sulphur for sulphuric acid
    - Increasing pressure to reduce their carbon footprint
    - A dwindling demand for their hydrochloric acid by-product
- ! SOP production from waste sodium sulphate is dependent on securing an acceptable and consistent quality at a very low cost

The challenge

Ensuring SOP quality keeps up with the increasingly stringent demands of this market

1.1 Bt

of CO_2 equivalent are linked to the manufacture and use of fertilizers – this is around 7% of the agr-food industry GHC emissions

Many standard powder grade fertilisers are totally unsuitable for use in today's high tech drip irrigation systems

- ! Inferior materials take a long time to dissolve and do not fully dissolve
- ! Insoluble particles will block the drippers and filters leading to costly downtime

For NPK producers the challenge is to find a reliable supply of consistently high purity products for manufacture

- ! A high concentration of nutrients in plant available form
- ! Very low levels of undesirable impurities like sodium and chloride
- ! **And on top of this carbon footprint has entered the equation**

Vateris is addressing the GHG challenge across two essential sectors with a unique production process

The agriculture and construction industries are responsible for nearly two-thirds of global greenhouse gas emissions. Vateris targets both sectors with innovative carbon capture and utilisation technology that transforms CO_2 from a liability into a valuable resource.

Agriculture

25% of global emissions

- 4% direct emissions
- Indirect includes land use
- Deforestation and supply chains

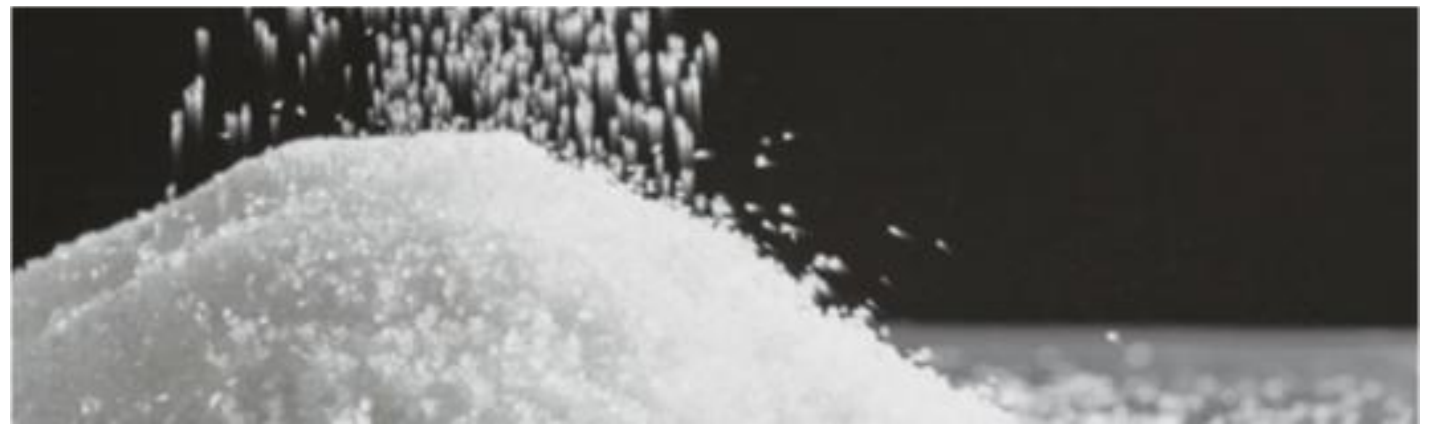
Construction

40% of global emissions

- 10% new build (8% concrete)
- 5% demolition
- 25% building operations

Our products are best-in-class

Vateris products beat incumbents on quality, performance, and carbon footprint



High Purity SOP

Performance potassium sulphate fertiliser for precision agriculture

- Maximises yield quality: +99% pure
- Environmentally friendly: less than 0.5% sodium/chloride content
- 30% less embodied carbon: compared to market standard

GypCarb

Engineered vaterite-based calcium carbonate for cement and concrete

- First-of-its-kind product
- 20-30% higher early strength
- Up to 35% lower carbon
- 100% standards compliant
- Cost neutral
- Ready to use, drop-in solution - no change to concrete production

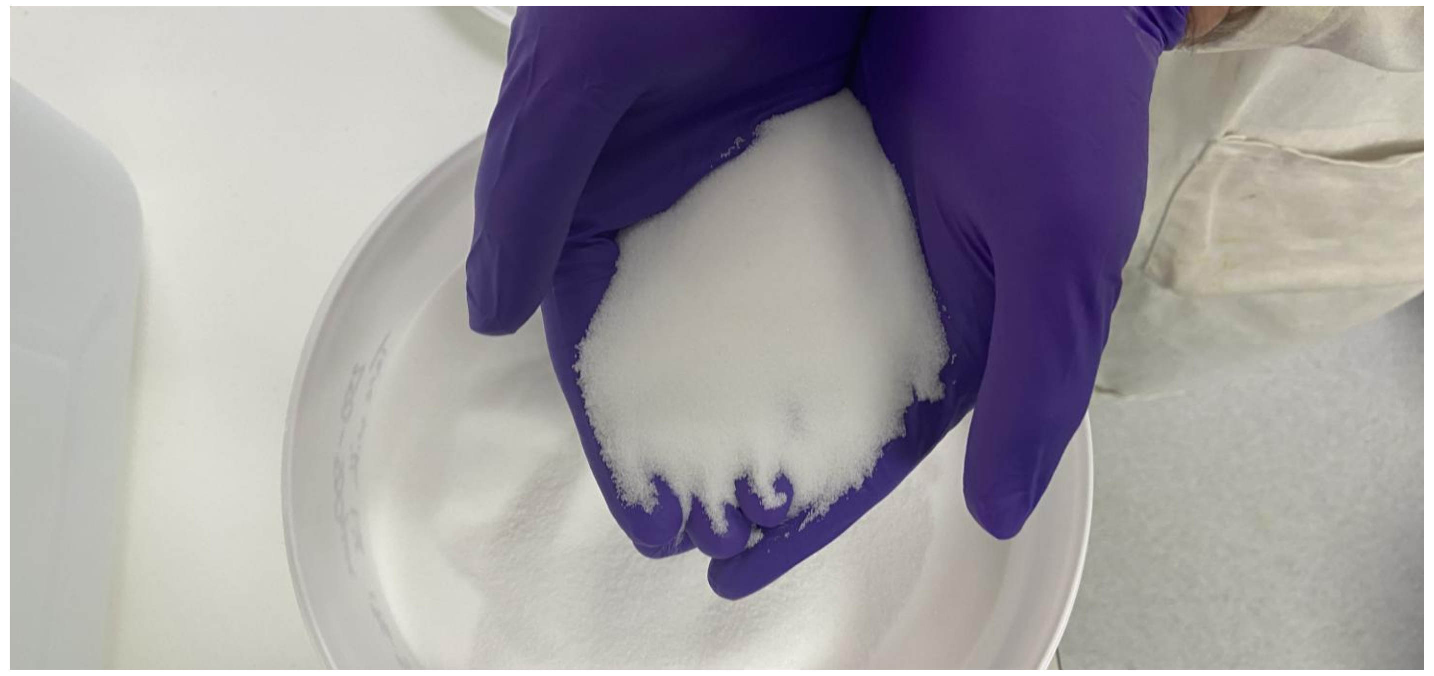
Carbon Capture

Verified, measurable, and monetisable carbon removal

- Permanent mineral storage of CO_2 from flue gas
- 440kg of CO_2 sequestered per tonne of GypCarb

SOP fertiliser

Sulphate of potash is the world's most popular low-chloride potash fertiliser



Low Salt Index

The lowest salt index of the three most common potash fertilisers (MOP, SOP, NOP)

- Ideal for chloride sensitive crops
- Recommended in areas at risk from salinity
- Reduced risk of leaching on sandy soils

Improves Crop Yield & Quality

Helps maximize profitability in cash crops

- Improves the size, colour & flavour of crops
- Helps build resistance to stress
- A valuable component of NPK's

High Concentration of Nutrients

Contains the two essential crop nutrients potassium and sulphur

- Sulphur in the plant available sulphate form
- Important in the development of proteins, enzymes & vitamins as well as photosynthesis
- Ideal when additional nitrogen is unnecessary or detrimental

SOP quality: initial production exceeds market specification

Chemical analysis shows high quality (low chlorine and high K_2O Content) - Particle size is adaptable to the application

VATERIS

HIGH PURITY WATER SOLUBLE POTASSIUM SULPHATE FOR FERTIGATION

	Typical Analysis	Guarantee	Analysis Method
Chemical Data			
K_2O (w/w)	53-54%	Min. 52%	ICP-OES
SO_3 (w/w)	45-46%	Min. 44%	ICP-OES
Cl (w/w)	0.3%	Max. 0.5%	Cl^- titration
Na (w/w)	0.3%	Max. 0.5%	Flame Photometry
H_2O (w/w)	0.05%	Max. 0.1%	Moisture analysis
pH (1% solution)	6 – 8		pH meter
Physical Properties			
Bulk density	1.2 - 1.4		
Angle of Repose	40°		
Solubility at 20 °C in pure water	110 g/L		
Insolubles (w/w)	0.05%	Max. 0.1%	

Nutritional Effectiveness

A high concentration of nutrients maximizes yield potential and improves crop quality

Healthier Soils

A chloride-free product that protects against salinity, helping to secure sustainable productivity.

Secure Supply

A new, innovative, low-carbon source of premium SOP to ease structural shortages

Application Flexibility

Ideal for direct use or seamless integration into a wide variety of fertiliser blends

Why Vateris will win

We are the first to make carbon capture performance driven, economical and scalable

Vateris is the only company to turn flue gas into best-in-class mineral products for fertiliser, cement and concrete markets, simply and at scale

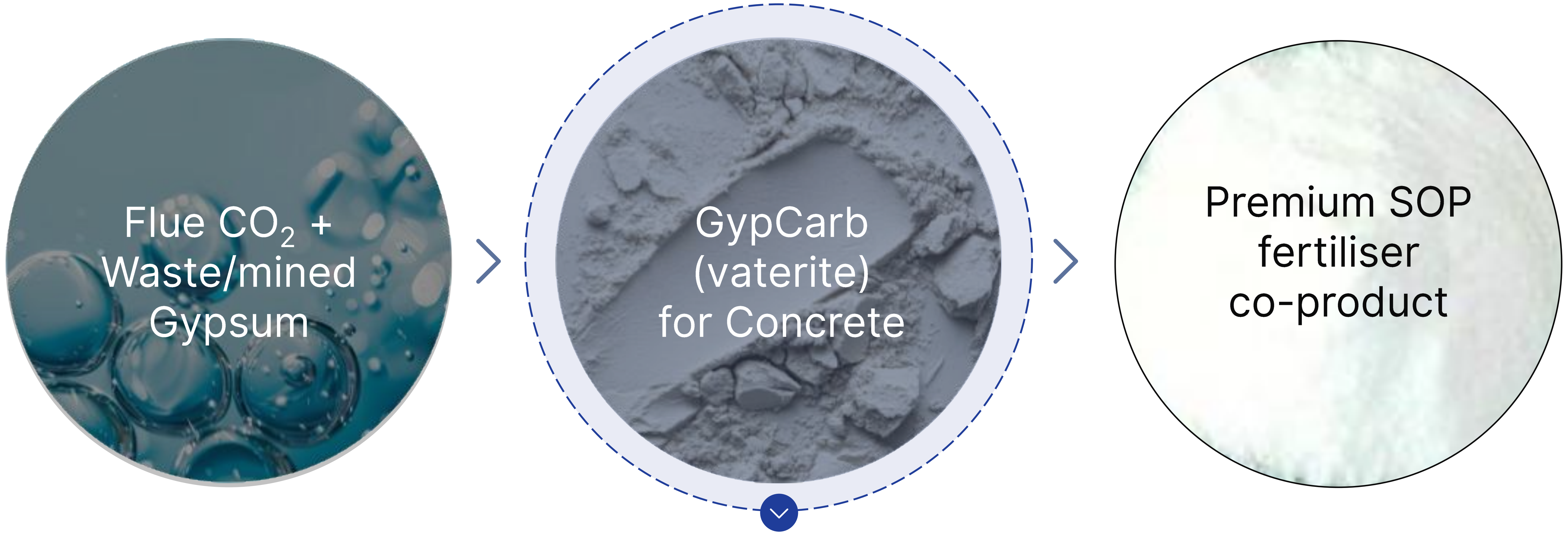
Backed by

HOLCIM GOLDBECK SCG

Counteract ZACUA VENTURES The builders fund sustainable ventures

Marshalls Waypoint KiiLTO

Breakthrough CO_2-to-materials platform, engineering SOP and vaterite from industrial CO_2

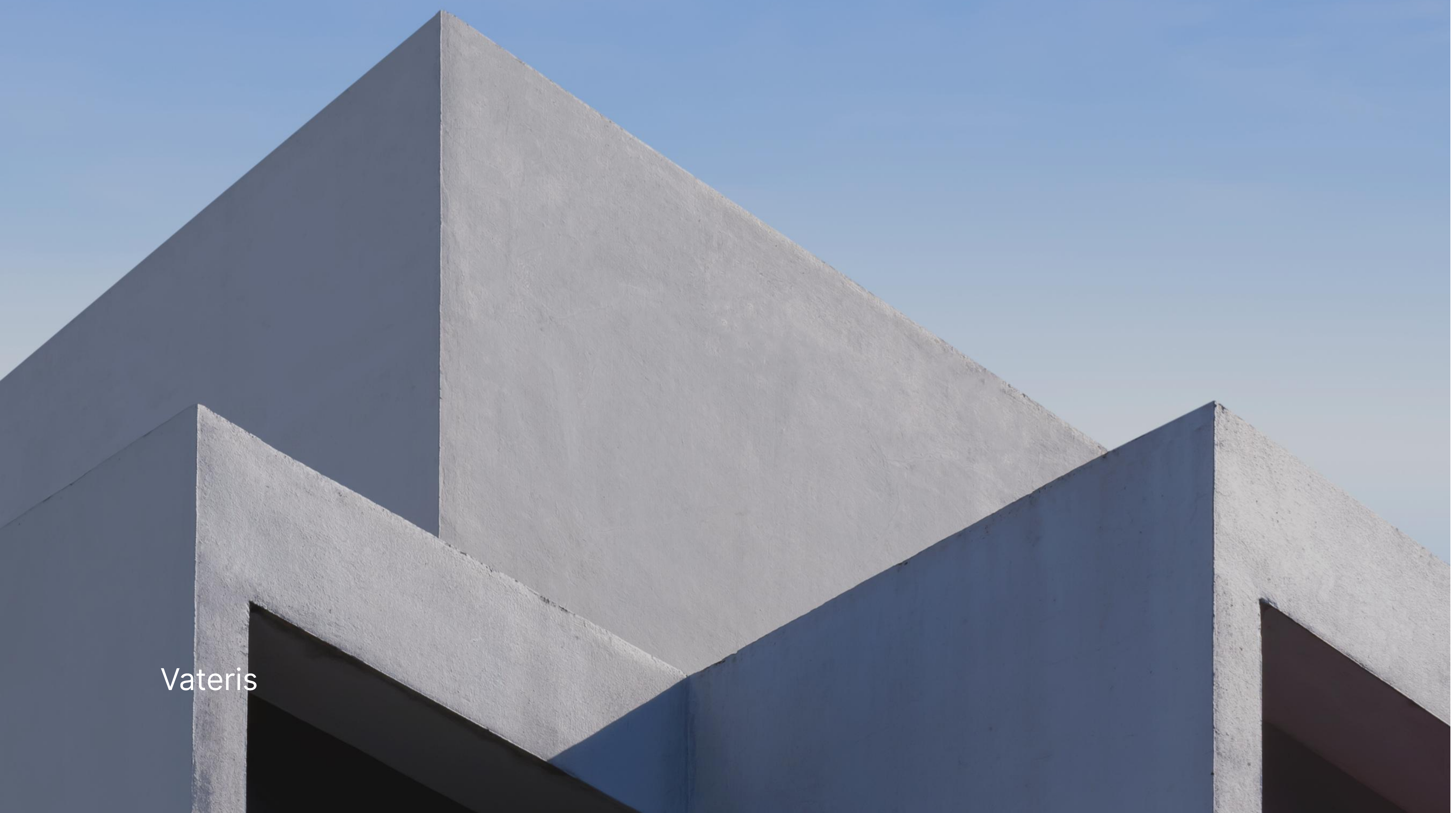


Novelty, never done before

The market

Our addressable opportunity is massive

and the time has never been more urgent



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SOP Fertiliser market

8 million tonnes per annum

Global SOP market is $5.7B with a structural supply deficit

Oil refined sulphur prices are rising and geopolitically fragile

Concrete market

14 billion m^3

The concrete industry has no standards-compliant replacement at scale

Supplementary cementitious materials (SCMs) are limited in supply capacity

The market is demanding high-performance, standards-compliant materials, today

CO_2 capture market

10 billion tonnes of CO_2 emitted annually from heavy industry (cement, chemicals, fertilisers)

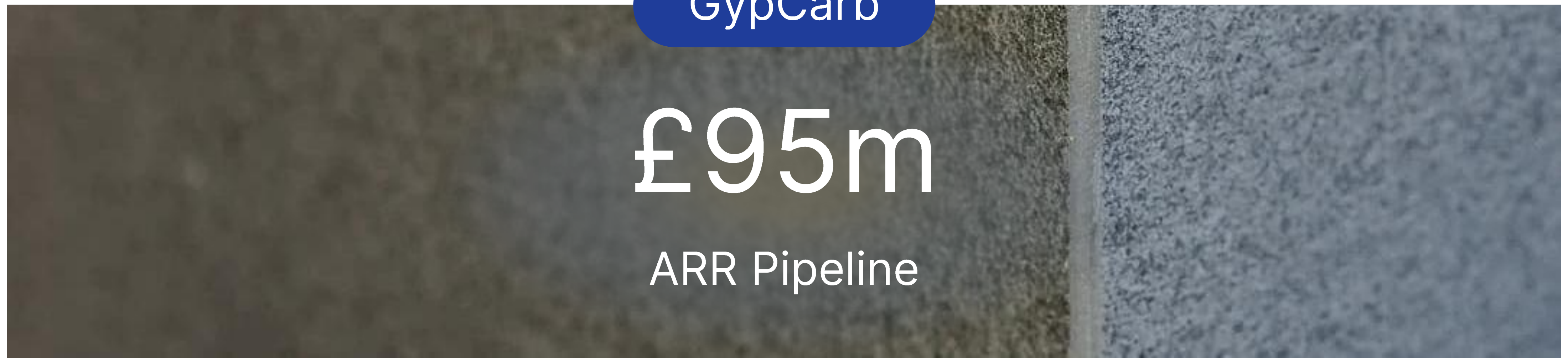
CBAM tariffs on carbon-intensive imports kick in 2026, making low-carbon SCMs a competitive necessity

EU ETS hit €85/t and rising

Product-market fit validated

Blue-chip industrial customers onboard: £250M+ ARR pipeline

GypCarb



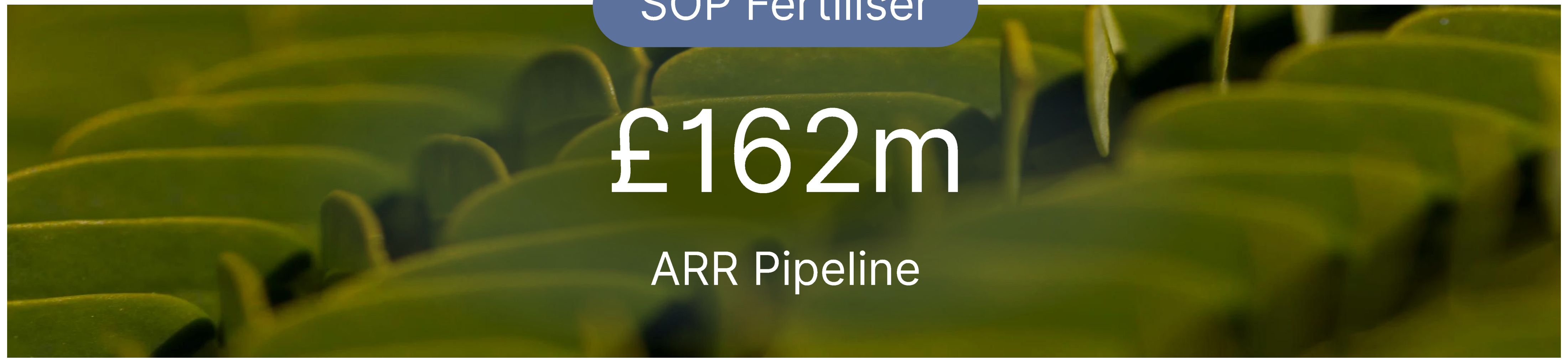
Binding offtakes in Progress

- HOLCIM
- GOLDBECK
- Marshalls

Majors in the pipeline

- Dalmia Bharat
- CARMEUSE
- UNACEM
- CEMEX
- TITAN
- MANNOK
- Limak
- Heidelberg Materials
- GOLDBECK
- Marshalls
- FLI global
- SHAY MURTAGH
- Ibstock Plc
- PanUnited
- BERDING BETON
- STRABAG
- KIBECO
- TBI
- KiiLTO

SOP Fertiliser



Binding offtakes in Progress

- Waypoint

LOIs in motion

- ICL
- PRAYON
- Calibre Engineering Chemistry

Our roadmap to scale

We are now moving to a demo plant as a ‘stepping stone’ to FOAK

Batch Plant

Technology validation

Gypsum - CO_2 + KOH process

Early concrete & SOP trials

Gypcarb | SOP Produced

1-2 kg/day

2024

Completed

Mini Plant

Mass & energy balance validation

Commercial feedstock testing

2-5 t material for field projects

Capex: £0.5m | TRL 5 - 6

100 kg/day | 170kg/day

2025-2026

Completed

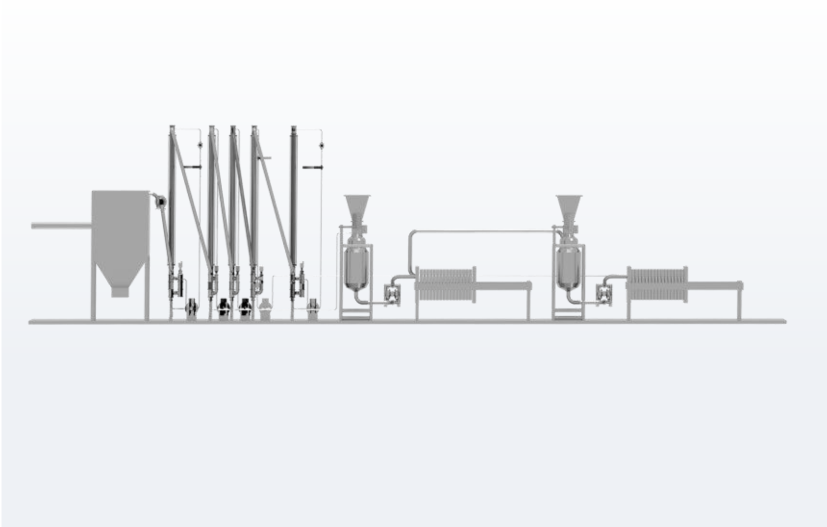
Demo Plant

24h continuous operation

Automated industrial equipment

First commercial revenues

Capex: £5m | TRL 7



1-2 t/day | 1.7-3.5 t/day

2026-2027

In progress

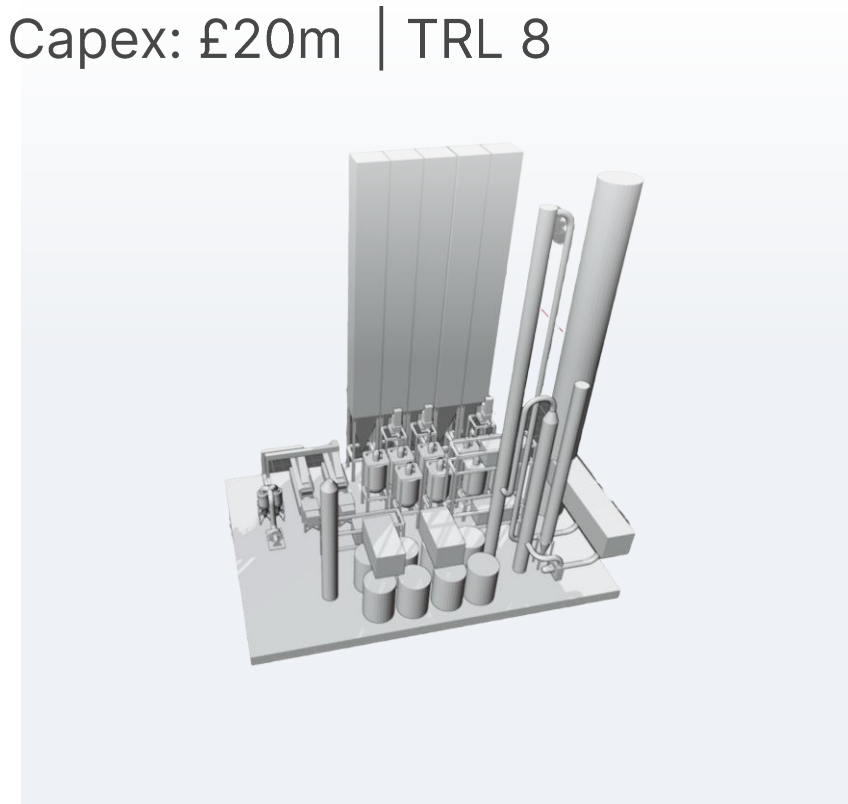
FOAK

First bankable industrial unit

Bolt-on to cement or fertiliser e.g. a green ammonia plant (as a source of CO2)

Full commercial production

Capex: £20m | TRL 8



100 t/day | 170 t/day

2027-2028

In progress

Full Scale Plant

3 x 100 t/day Gypcarb modules (1.7x SOP produced per tonne of GypCarb)

Cement and fertiliser blend supply chain integration or commercialised as an additive supply

Capex: £40m

IRR ~ 20%

300 t/day ! 500 t/day

Post 2028

Fundraise completes the demo plant and accelerate toward the FOAK industrial module
Industrial module of 100t/day can be first module on an industrial site of the eventual 300t/day full commercial scale plant

Our business model is smart and scalable

Phase 1 (2027-2030)

JV on first commercial plants with industrials

- Holcim or a fertilser manufacturer as anchor partner for 1st EU commercial plant: GypCarb blended into Holcim cement for tight strategic integration, similarly SOP could be blended in the NPK blends
- Use demo plant product to support offtake GypCarb and SOP from first commercial plants, enter European/MENA/Asian markets

Phase 2 (2030+)

Licensing platform

- IP-rich model designed for scalability - plants co-located at partner sites under JVs
- Licensing deals with industrial partner base across cement, chemicals and fertilisers
- Revenue from royalties and revenue-sharing from vaterite and fertiliser sales

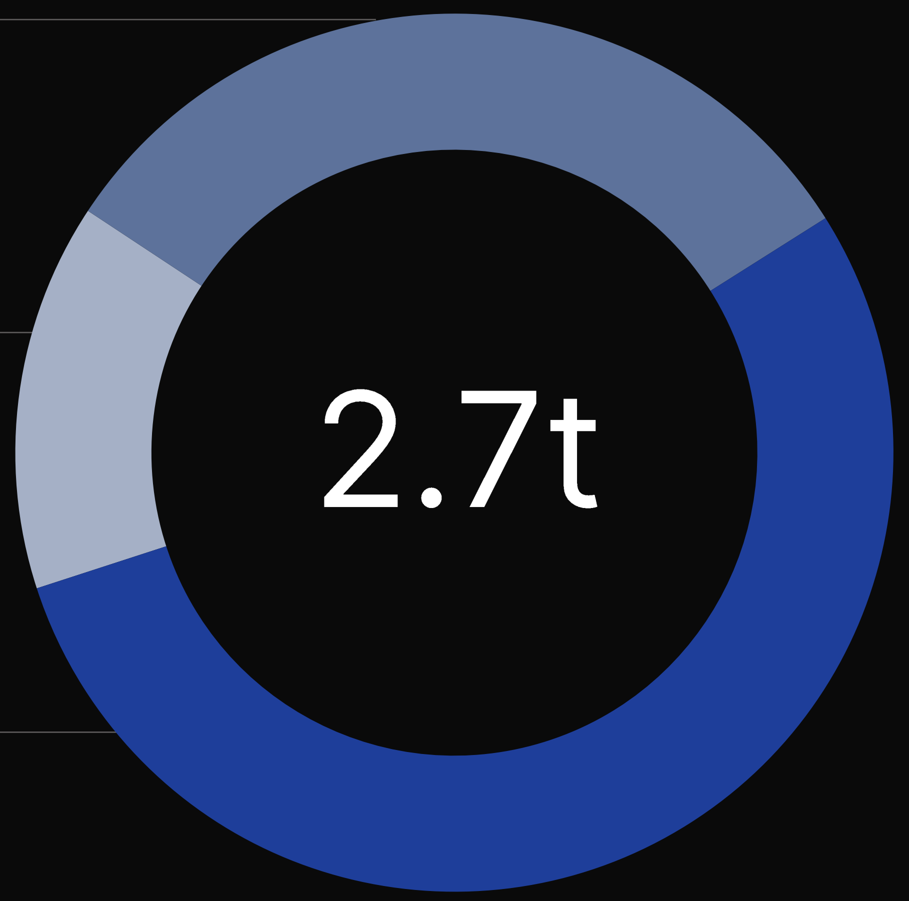
The economics are strong, and will continue to improve as we scale

£1,220 revenue per 2.7t output

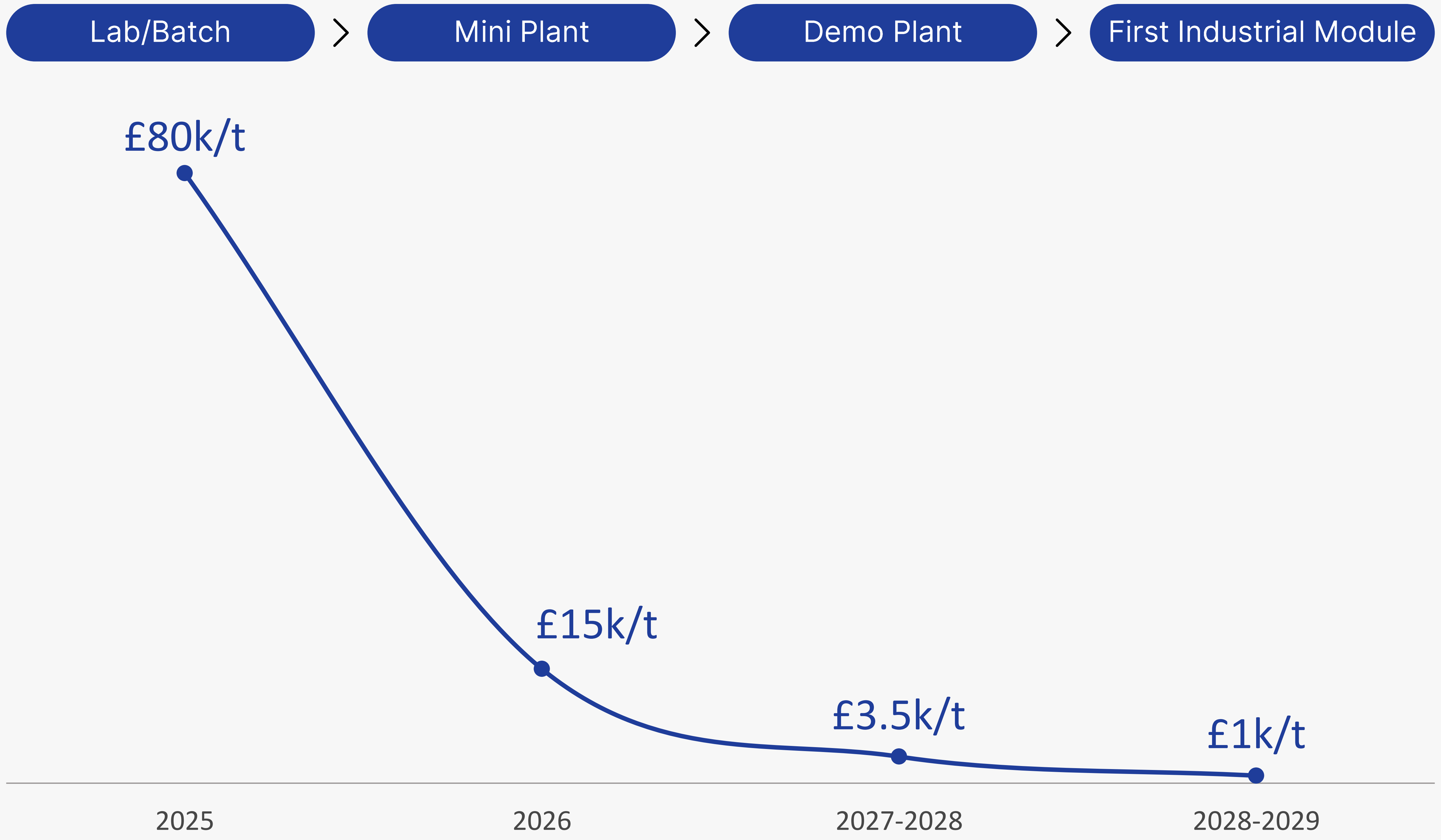
1.7 t SOP fertiliser

0.45 t CDR
per tonne of GypCarb

1 t GypCarb



Cost of production per tonne of all outputs



Our team is best in class

World’s best scientists and engineers; with best-in-class commercial talent

Dr. Sid Pourfalah
CEO & Founder

- Serial Entrepreneur with 25 years of experience in innovative sustainable construction and R&D
- Chartered Civil Engineer; delivered large-scale development projects (£100m+)

Dalraj Nijjar
COO & Co-founder

- Specialist in growth & commercial ops in industrial-tech startups
- Forbes 30u30
- UK Gov Young Innovator Award Winner

Caspar Schoolderman
CTO

- Process Engineer with 25 years experience in scaling up processes within speciality chemicals and carbon capture
- Former CTO and COO at C-Capture

Jeremie Rombaut
CCO

- Executive leader with 20 years experience within industrial business transformation & market expansion
- Former Managing Director at Ibstock; Regional Head at Holcim; Managing Director at Lafarge La Reunion

Nicolas White
Commercial Director - Fertilisers

- 25+ years in sales & marketing across international agri-chemical and crop science companies
- Led marketing strategy across 30+ markets with a €17M gross margin portfolio; deep technical foundation across fertilizers & crop protection

Team of 17 based in the UK

What's next

£12m round unlocks rapid scale

Build out SOP and GypCarb demo plant

Complete iconic projects with customers

Unlock financing for FOAK

Supported by the world class industrial investors

HOLCIM | GOLDBECK | SCG | KiiLTO | Counteract | sustainable ventures | ZACUA VENTURES The builders fund

VATERIS

Thank you !

Let’s connect and explore the potential together

Contact:

invest@vateris.co.uk

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