



CILANTRO

Pioneering Net-Negative CO₂ Cement

Transforming a crucial global industry from a major CO₂ emitter into a climate-positive asset.

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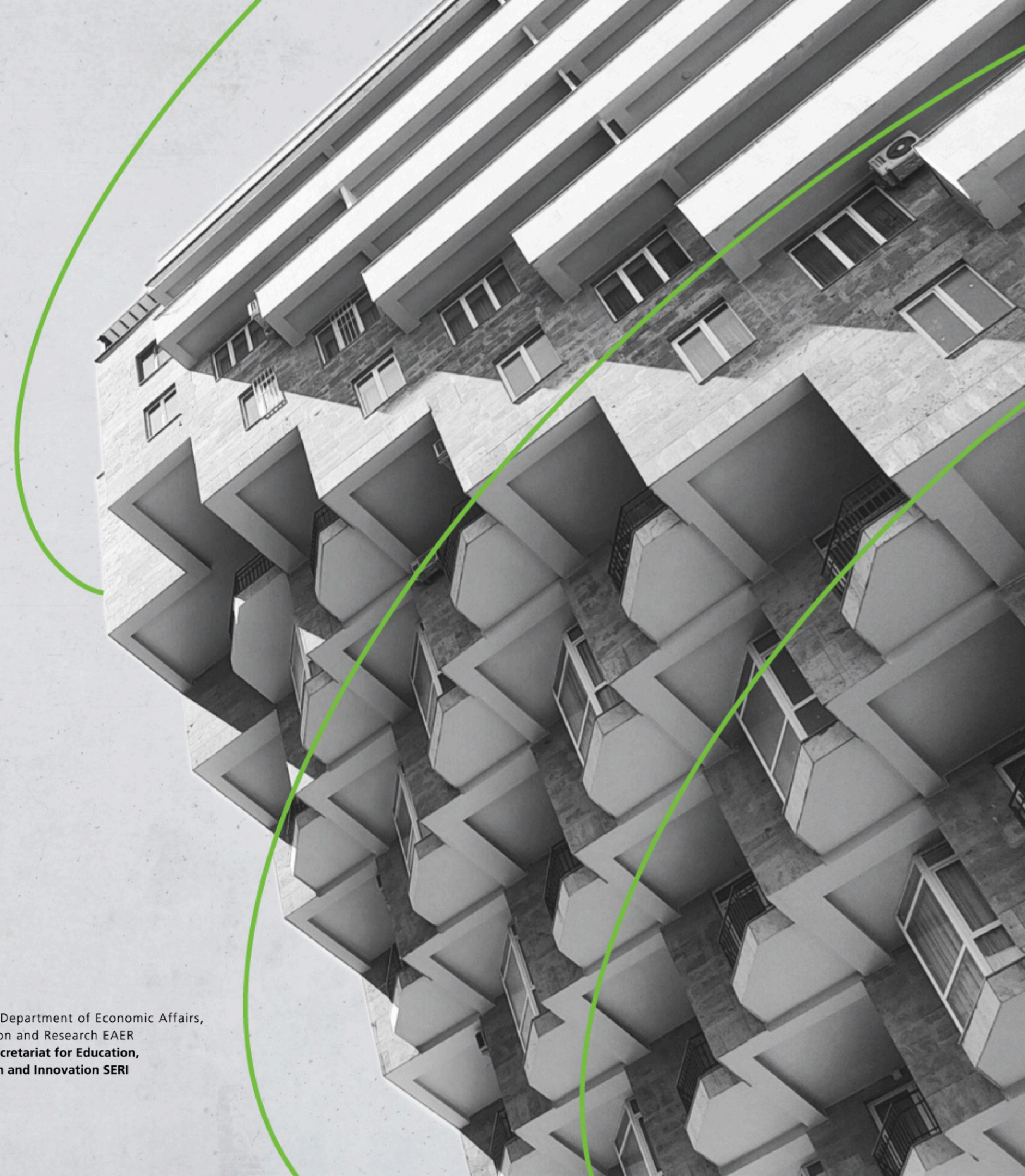
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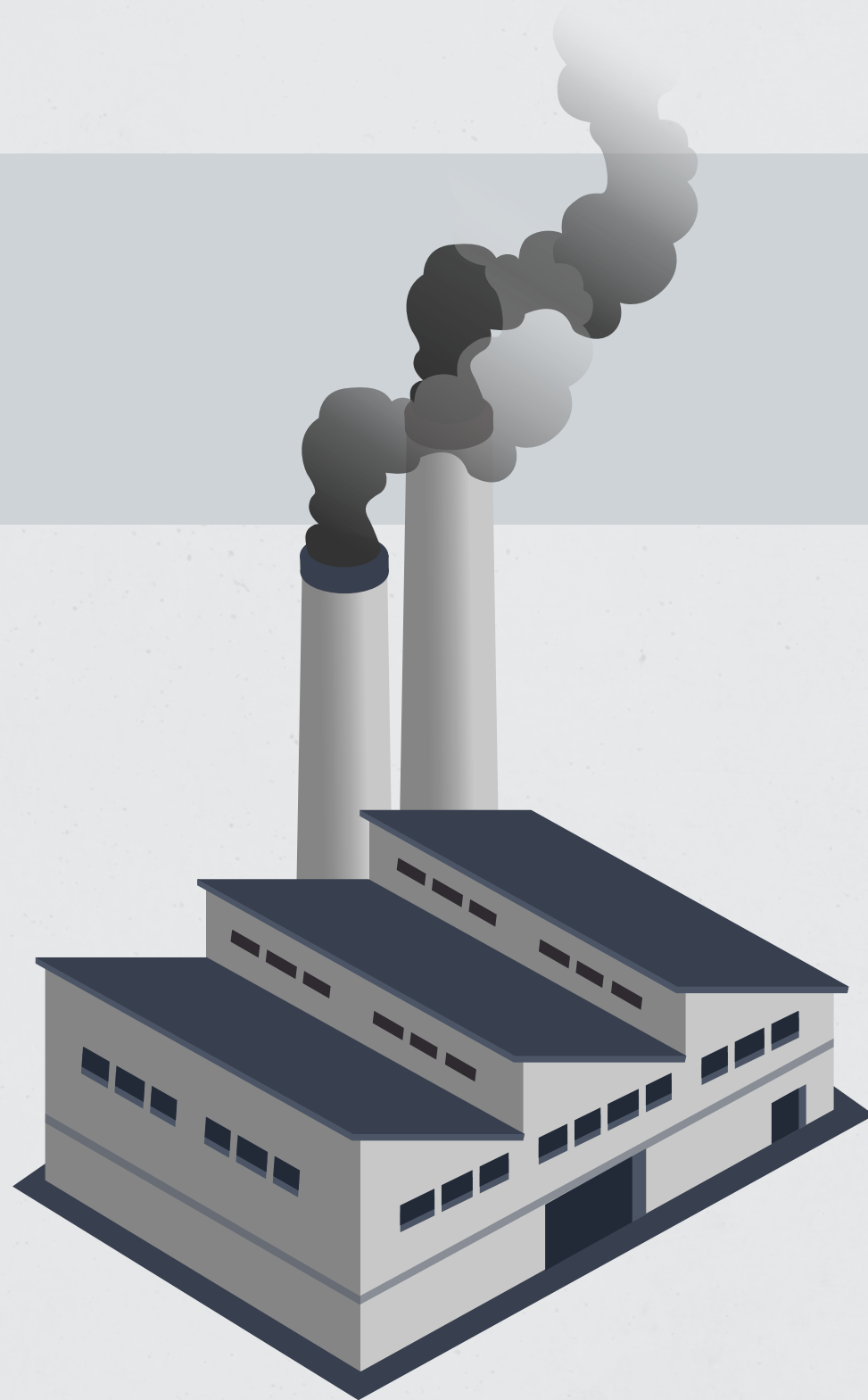
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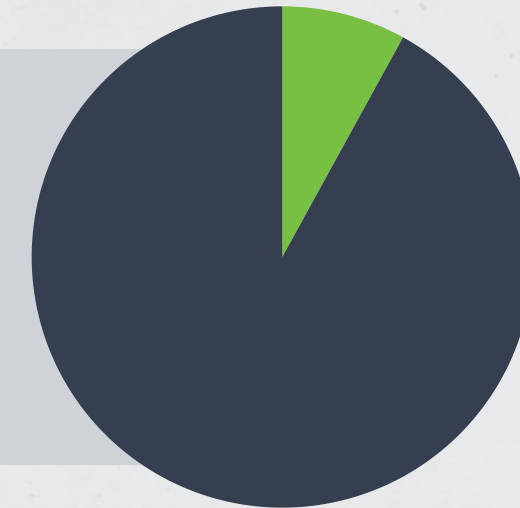
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The Crisis: 8% of Global Emissions



8% of Global CO₂ Emissions



The cement industry is a cornerstone of infrastructure, yet it accounts for approximately 8% of global CO₂ emissions - more than air travel. Traditional production relies on high-temperature processes that chemically release CO₂. Achieving climate targets requires a fundamental chemical revolution, not incremental fixes.

CILANTRO is disrupting this trillion-euro market with the only viable non-thermal technology designed to achieve net-negative CO₂ cement from day one. This is essential infrastructure for the Net Zero transition.

The Breakthrough: Non-thermal CO₂ Prevention

We substitute the energy-intensive, high-heat thermal process (calcination) with mechanochemical activation of limestone under a controlled gas atmosphere. This eliminates the chemical generation of CO₂.

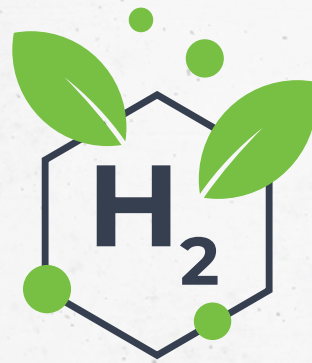


Beyond Decarbonisation: A Circular Solution



Zero process emissions

We prevent CO₂ from being released.



Hydrogen integration

The process relies on low-cost hydrogen feedstock.



Circular value

We co-produce valuable gases (CO/Methane) used as clean synthetic fuels or chemical precursors.

The Implementation Team



CILANTRO is executed by a consortium of eight partners across six European countries. We combine leading expertise in mechanochemistry, materials science, industrial engineering, and IP commercialisation.



The Breakthrough: Non-thermal CO₂ Prevention



Clean air & Climate neutrality: We deliver a direct, quantifiable solution for the 8% CO₂ problem. Our technology is essential for Europe to meet its Net Zero construction targets.

Protected innovation: We are securing the core intellectual property (IP) around the mechanochemical process. This protects the innovation and provides a clear licensing pathway for industry-wide adoption.

Research

**Validated
Technology**

**Industrial
Demonstration
Blueprint**

The Path Forward: Having successfully de-risked the foundational science (TRL 4), our immediate focus is validating the technology's scalability and preparing the blueprint for an industrial-level demonstrator. This ensures our results transition efficiently from the laboratory to the market.



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