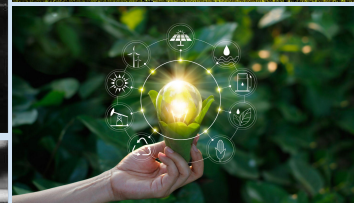




# Reversing Climate Change is **Possible!**

Patented Low Cost Direct Air Capture Innovation  
with scalability for Billions of Tonnes of CO<sub>2</sub>.

*Innovating for a greener tomorrow!*



[www.atmosfuture.co.uk](http://www.atmosfuture.co.uk)

# Summary

## The Problem

- CO2 contributes to 76% of global greenhouse emissions.
- Around 7 Million people are killed from air pollution annually.
- 360 billion tonnes of CO2 are emitted annually.
- Current direct air capture solutions are not efficient.
- Average cost of CO2 capture is \$150/ Tonne

## Revolutionary change

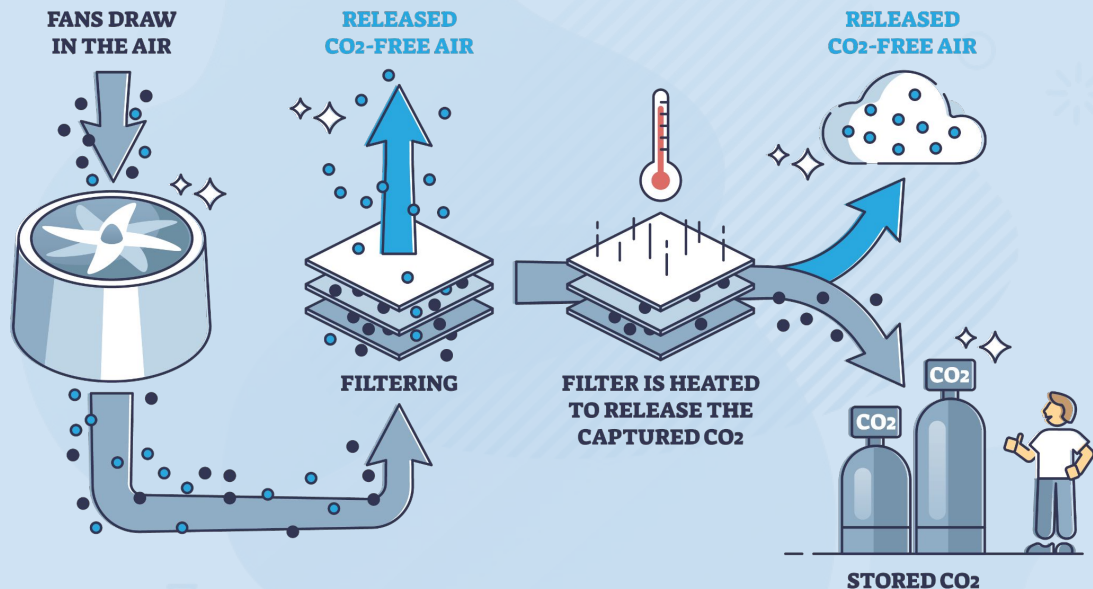
- Atmosfuture has a disruptive and innovative solution to climate change.
- A 3 in 1 solution of carbon capture, electricity generation and sequestering CO2 and other elements.
- Patent protection almost granted for IP.
- To be able to find solution sometimes you need to be outside of the industry.



## Direct Air Capture

# The Current Approach

- There are approximately 18 DAC providers mainly based in USA, Europe & Canada. All these solutions emit at least 3 times more than they capture.
- The captured air is boiled to capture the CO<sub>2</sub> causing further emissions and heat and parasitic losses.
- Once collected the captured CO<sub>2</sub> is being stored underground by most of the providers which has long-term environmental consequences and hasn't been deemed as a safe method.



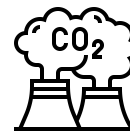
# Concerns of Current DAC Systems



**Energy Intensive** – requires significant amounts of energy to operate fans & heating.



**Cost** – capture costs are higher due to energy intensiveness.



**Carbon Off-set of Manufacturing** – production and installation can result in Carbon Emissions.



**Resource Requirements** – needs materials to absorb chemicals which can have further environmental impacts.



**Scalability** – Emits 3 times more than what is captures which is not sustainable.

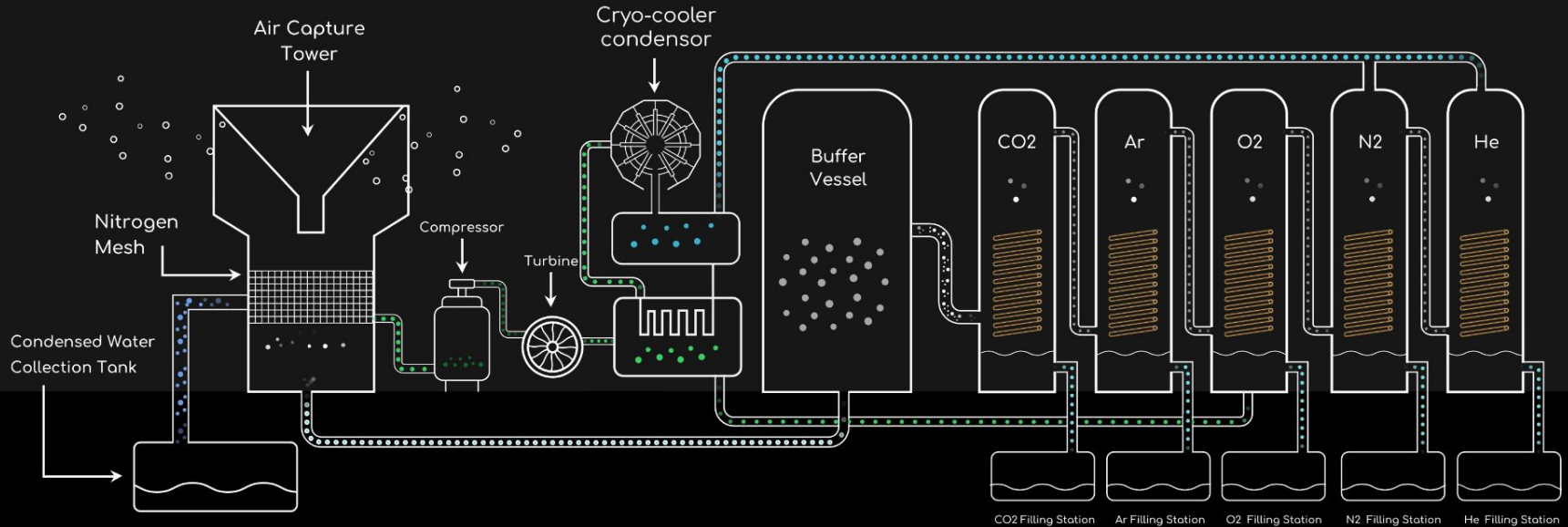


**Environmental Impact** – capture & disposal of chemicals is not benign. There should be no deficit impact.



# REVFRACC – Reverse Fractionating Carbon Capture

## The Solution



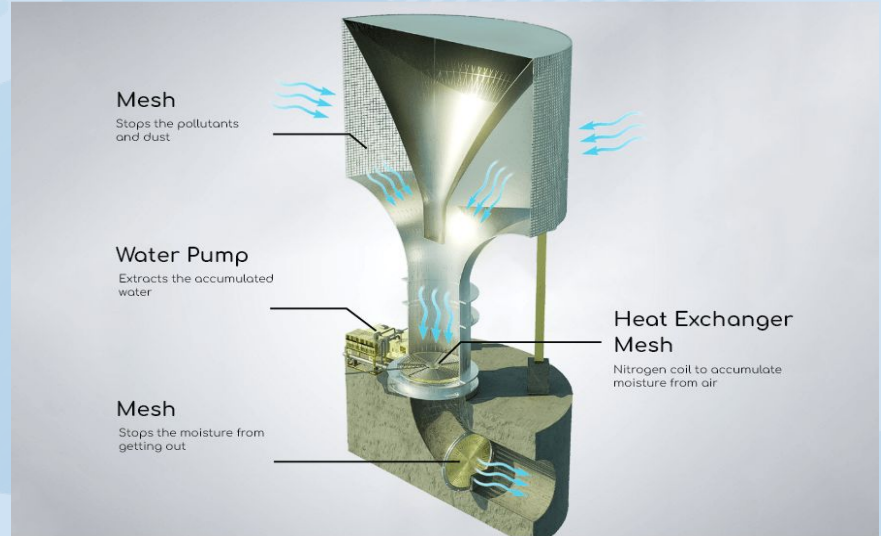
- **REVFRACC** is a disruptive and innovative solution. Unlike the traditional method, it uses towers to capture air.
- Also, instead of heating the air to filter and the CO2 we reverse this process using super cooling tech to do it.
- Any heat that is produced from this process is used in a turbine to generate electricity.
- The captured elements are sequestered into tanks which can be commercialised creating a circular economy.



# The Future

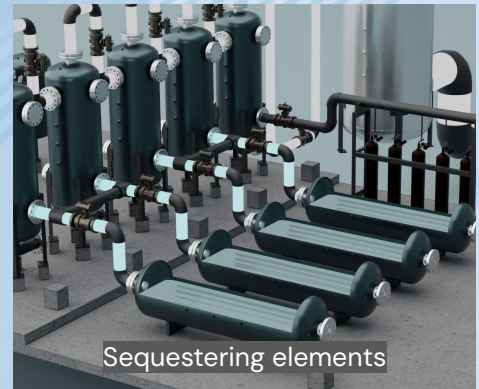
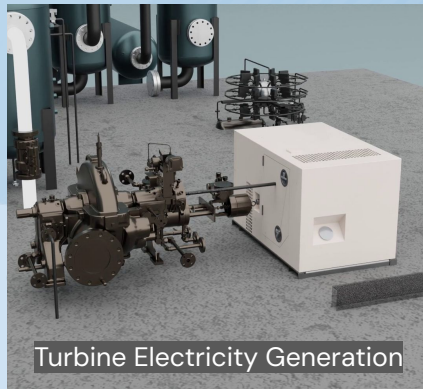
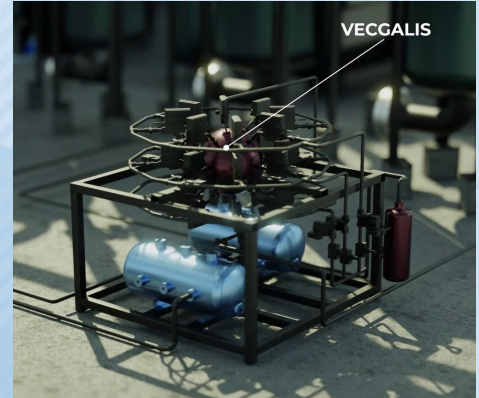
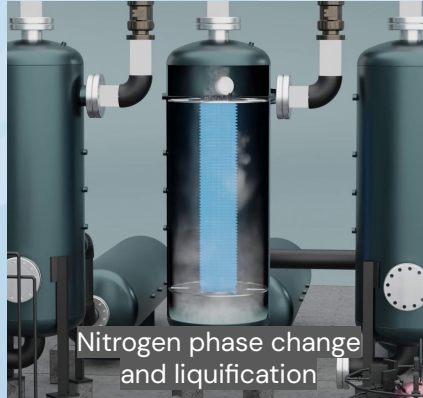
**REVFRACC** affordably reverses climate change. Cryogenic cooling has been considered too expensive simply due to the energy, cost and volume limitations of working with low temperature fluids and gases. Moreover, low grade thermal energy can never be recovered.

- **Tower Air Capture:** having a series of towers creates a low pressure zone which will act as a vacuum to capture air naturally. The air is filtered through a mesh to remove any dirt. The water is also extracted from the air and stored into a tank.
- **Rapid Condensation Mechanisms:** Cold nitrogen gas enters an evacuated cylinder, causing rapid cooling and contraction by 800 times into liquid.



- **Electricity Generation:** the heat given off from the process of VECC and any gas that hasn't been sequestered is used to turn a turbine generate electricity. This is why there is a Net-Zero effect!
- **Creating a Circular Economy:** The elements sequestered can be sold to various industries eg:
  - O<sub>2</sub>** – NHS, Metal Manufacturing, Marine.
  - CO<sub>2</sub>** – Fuel, Food & Drink, Construction, Concrete.
  - Nitrogen** – Aerospace, Energy, Oil & Gas.
  - Argon** – Window Insulation, Welding & Fabrication

And many more!
- **Super Cooling with VECC:** Nitrogen liquid is used in a heat loop to freeze the air into its various particles such as O<sub>2</sub>, CO<sub>2</sub>, Argon etc. This will then be sequestered into tanks.



- 3 Solutions from REVFRACC
  1. Capture air from the atmosphere and clean it, thus reducing the impact of climate change.
  2. Capture elements from the air in tanks via a closed loop turbine system.
  3. Generate energy through heat recovery.
- Additional revenue streams from Carbon Credits market at £35/tonne of CO<sub>2</sub>.
- REGO's can be sold at a premium to energy suppliers due to unique energy generation.
- License technology to customers to adopt globally.
- Exclusive rights to use of IP which is part of the tech process.
- Technology is in process of the patent being approved by April 2024.
- REVFRACC can be easily customised into a CCUS system.





# Competitor Comparison – DAC

Company	Project Name	Location	Carbon System Type	Size (Acres)	Output per Annum CO2	Cost/Tonne	Scalability
Atmosfuture	REVFRACC	Watford	DAC	1	35,000	\$40	Scalability to over billion tonnes per annum and modular.
Climeworks	Orca	Iceland, Hellisheidi	DAC	0.42	4,000	\$1200	
Occidental (1PointFive & Carbon Engineering)	Stratos	Ector County, Texas	DAC	65	500000	\$580 – 810	
Global Thermostat	M-Series	Denver, Colorado	DAC		> 100,000	\$300 – 400	
Aker Carbon Capture	Brevik Cement Plant	Asnaes, Denmark	DAC	0.4	430000	\$85 – 190	
Mission Zero	Mission Zero CC	London	DAC		120	\$300	

# Key Benefits of REVFRACC



No large fan to 'suck in air' to extract CO<sub>2</sub>. Therefore, there are no emissions.



Small condensing towers over a large area create a large natural low pressure sink - Innovative way of capturing air.



Nitrogen is used for the cryogenic process - an unheard of and innovative approach.



Liquified components of air are sold creating income and a true circular economy.



Thermal energy from air is converted to work via a patented low temperature turbine which reduces energy consumption and has a non zero impact.



85% off the shelf equipment and low Cap Ex and larger ROI.

# Team



**Vinny Patel**

**Co Founder / Director** – Former director of an energy company which was also generating solar energy with a turn over of c£68m in 18 months.



**Sayeesh Madangirikar**

**Project Manager/Electrical Engineer** – Has led a number of projects, bringing a sustainable edge to our mixed-use development.



**Pallavi Mane**

**Supply Chain Manager** – Has vast experience in building and maintaining supply chain activities.



**Shamir Budhdeo**

**Inventor** – Designer and holder of several zero emission technologies currently with IPO for validation.



**Daniel Fernandes**

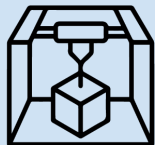
**Mechanical / Technical Lead – Industrial Design Engineer** – Has 5+ years of experience in innovation and mechanical structural designs and process

## Team

- **Atmosfuture Limited** – is a clean-tech innovator of renewable technology with IP in zero emission technology and Direct Air Carbon Capture. The company is responsible for project management including partnerships and funding.
- **ESP Consulting** – Sustainability consultants with a real world understanding that lasting change only occurs when the economics underpin the change. ESP has helped design REVRACC.
- **Enigmasoft Technologies Pvt Ltd** – Engineering Research and Development (R&D) consultants. They have vast experience in assisting the engineering and development of renewable technology. Engima have engineered REVRACC with the calculations and CFD modelling. They are also assisting with supply chain.

 esp  
consulting Atmos  
future ENIGMASOFT  
TECHNOLOGIES



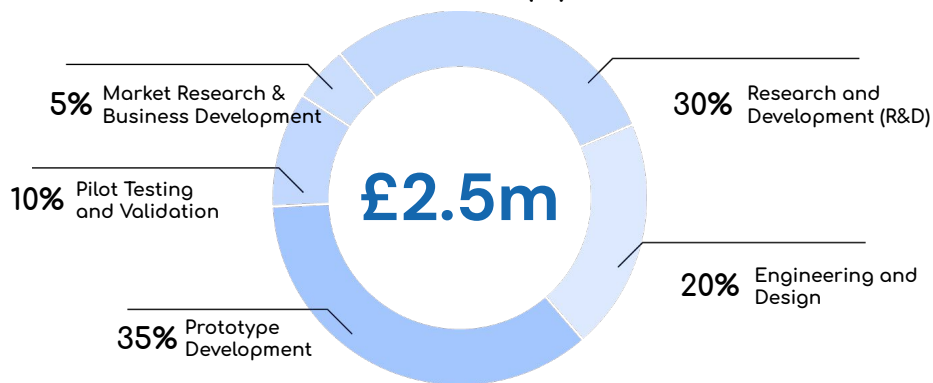


- **TRL 2–3: Proof of Concept:** Secure funding, build partnerships, conduct feasibility and desktop prototype studies, and protect intellectual property for REVFRACC.
- **TRL 4–5: Prototype Development:** Develop and validate a small-scale DAC prototype, engage stakeholders, and secure additional funding for further development.
- **TRL 6–7: Prototype Testing & System Demonstration:** Plan scale-up, implement pilot projects, ensure regulatory compliance, and conduct public relations to test DAC technology in real-world settings.
- **TRL 8–9: Commercialisation:** Deploy commercial-scale DAC facilities, enter the market strategically, optimize cost efficiency, integrate into supply chains, leverage government incentives, and maintain public awareness while monitoring and reporting environmental impact.

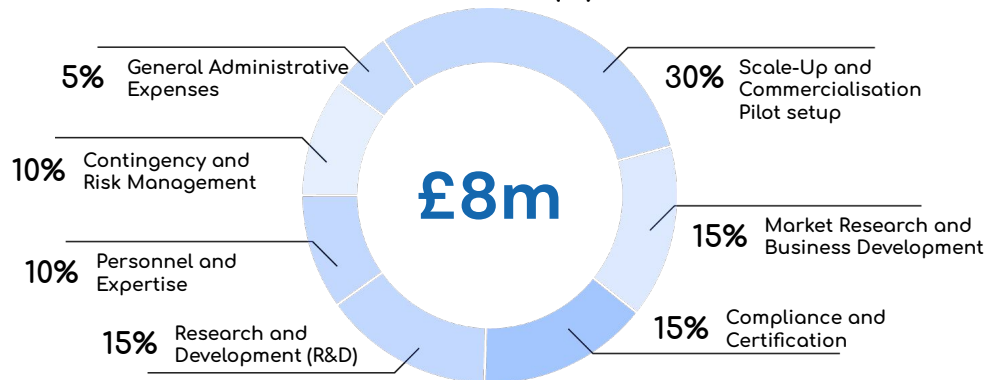


# Funds Utilisation Breakdown

Funds Utilisation (%) Year 1



Funds Utilisation (%) Year 2



# Key Figures and Information

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1. Seeking £2.5m to achieve TRL 5 and a further £8m for TRL 9.
2. Project currently is at TRL 2.5.
3. Revenue projected over \$100m in 3 years.
4. Costs are under \$40 per kg/CO<sub>2</sub>.
5. ROI in 3-5 years with equity options.
6. Team will be increasing with financial and technical NEDs.
7. Research and academic institutions have engaged to move the project forward.

More information and data room can be shared after signing NDA.

## Contact:

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**Atmosfuture** – Innovating for a Greener Tomorrow

