



UNLOCKING CARBON CAPTURE TECHNOLOGY TO DECARBONIZE YOUR FUTURE

Pitch Deck – May 2024



The Founders

We identified a huge non addressed market and a breakthrough technology !



Co-founder & CEO
Samuel Thiry

Assets :

- **Driven by Impact**
- Used to work in a fast pace growing environment where **agility** makes the difference
- Team Management, Leadership
- Skills ranging from **Business Development** to **Operations**, incl. Process and Strategy
- **Customer-centric, Result-oriented**

Past-experience :

- **Vice-President** at John Cockerill **Hydrogen**
- **M&A, Sr Project Manager**
- **COO & Key Account Manager** in the **Energy sector** at Memoco (elia, RTE and Siemens)
- Worked for 10 years at TotalEnergies, incl. Operations, Process & Strategy
- Mechanical **Engineer** – UCL, École Polytechnique



Co-founder & CTO
Aurélien Vantomme

Assets :

- **Key role in the CO₂ ecosystem for the past 4 years**
- Experience in R&D and industrial environment
- **Huge know-how in technology scale-up**
- Endorsed for excellent leadership & creativity.
- Used to build teams (30+ people)

Past-experience :

- 17 years at TotalEnergies :
 - **CO₂ emissions reduction Manager**
 - **R&D Manager**
 - Research Center **Executive Committee**
- **PhD in Chemistry** - University of Namur (BE) & Jilin University (China)
- Inventor of more than **40 patents**, author of 50 scientific publications. More than 2000 citations



*strong and proven complementarity :
from the chemical building blocks to
the final integrated solution*

Our equipment captures CO₂ from flue gases at low cost

150 B€ per year market by 2035, strong drivers

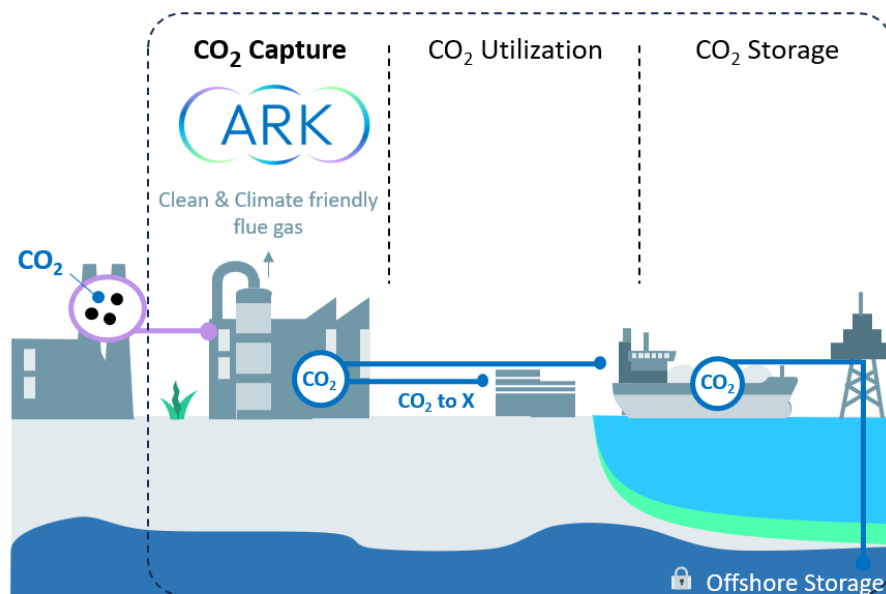
Break-even EBITDA by 2028 ; 260 M€ revenues by 2032

We are raising funds for the first 2 years

The only technology allowing low carbon capture cost for Gas Power plants

- Innovative flexible hybrid technology viable for a large range of CO₂ concentrations
- Powered by renewable electricity only
- De-risked technologies upscaling with 3 pilots in real conditions
Our first unit is already running, it captures 5 kg CO₂ per day
- Cost-efficient developments supported by strong partnerships

CCUS Value Chain



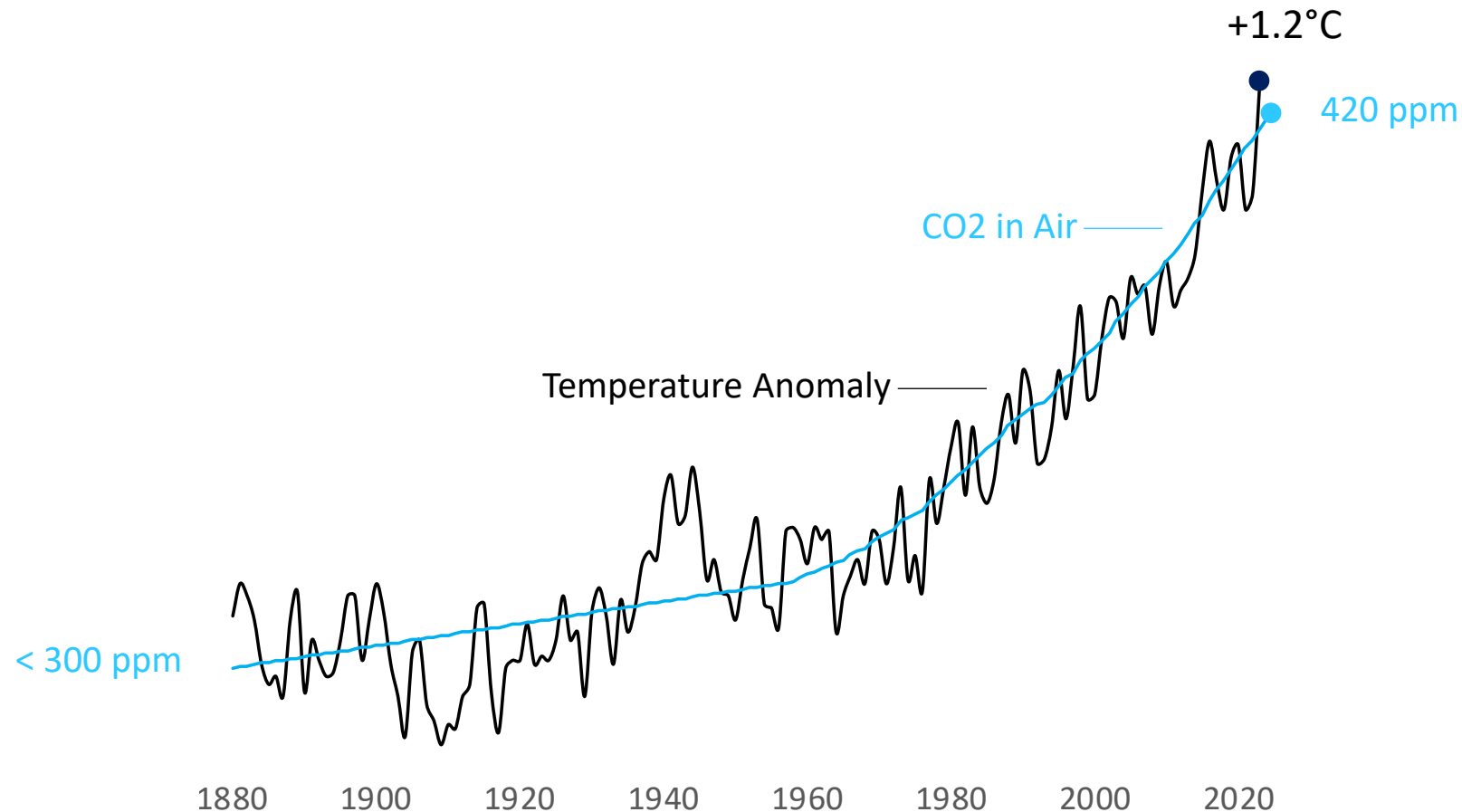
We will succeed thanks to

Highly experienced founders with industrial & managerial backgrounds ; huge network

- Proven know-how and expertise complementarity
- Deep experience in large team management
- Used to work in a fast pace growing environment where agility makes the difference
- We know what the Customer wants !



« It is unequivocal that human influence has warmed the atmosphere, ocean and land »

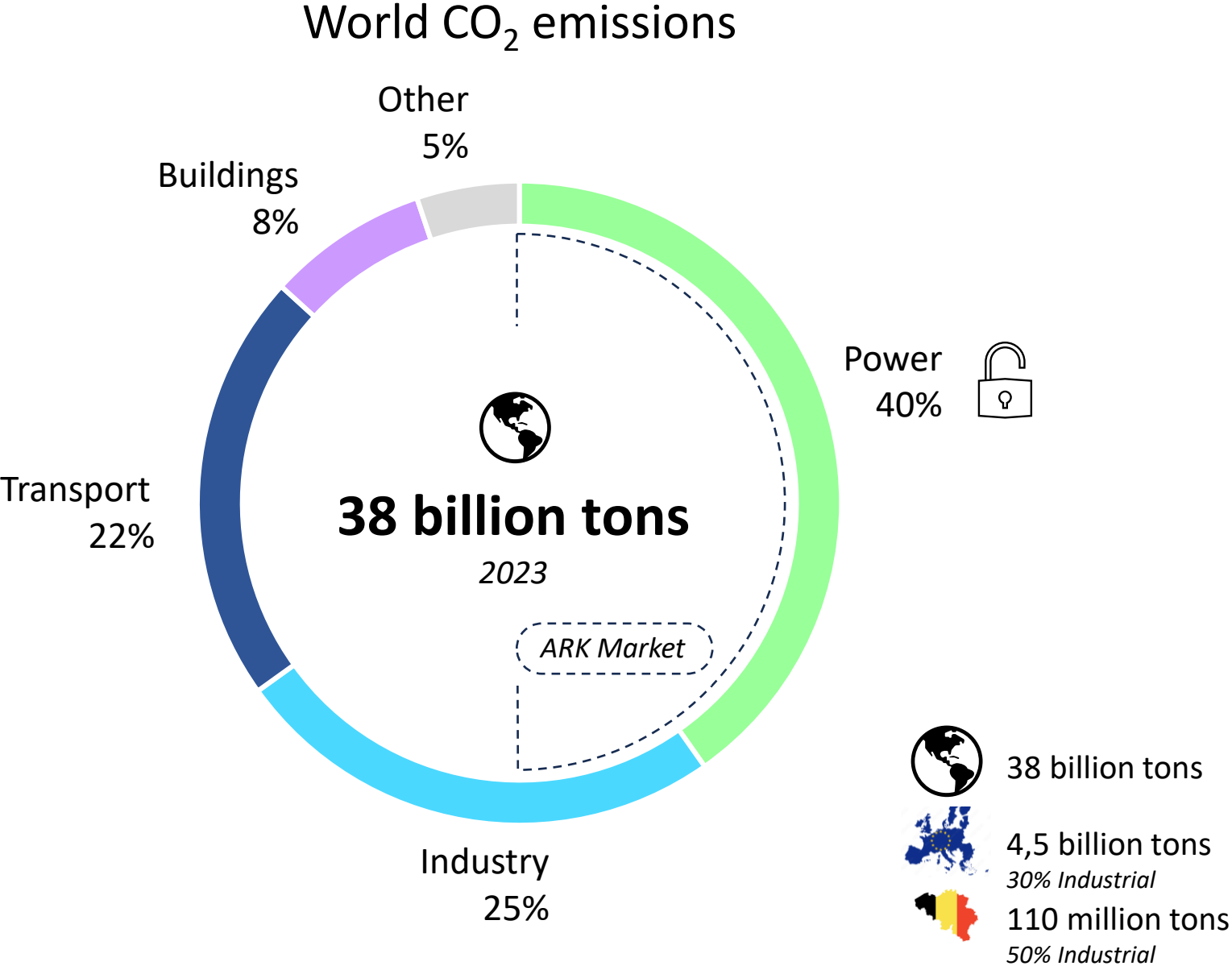




CO₂ Capture is a **MUST** to reach NET ZERO emissions by 2050

- Avoid
- Reduce
- Capture

SOURCE : INTERNATIONAL ENERGY AGENCY

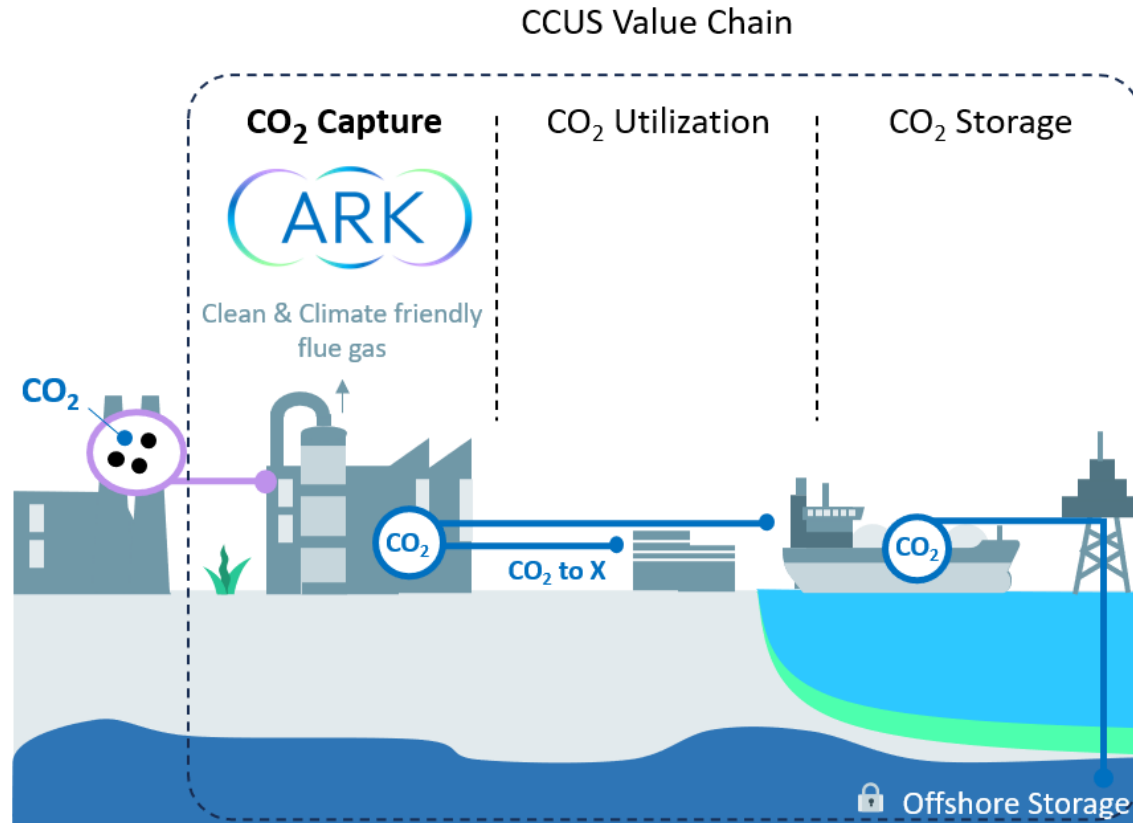




Our equipment captures CO_2 from flue gases at low cost

Clean flue gas is released to the atmosphere

The **ONLY** technology allowing low carbon capture cost for Gas Power plants



Solution
6

Low
capture
cost

De-risked
technology

Versatile
solution



A **tremendous market** is ahead of us :

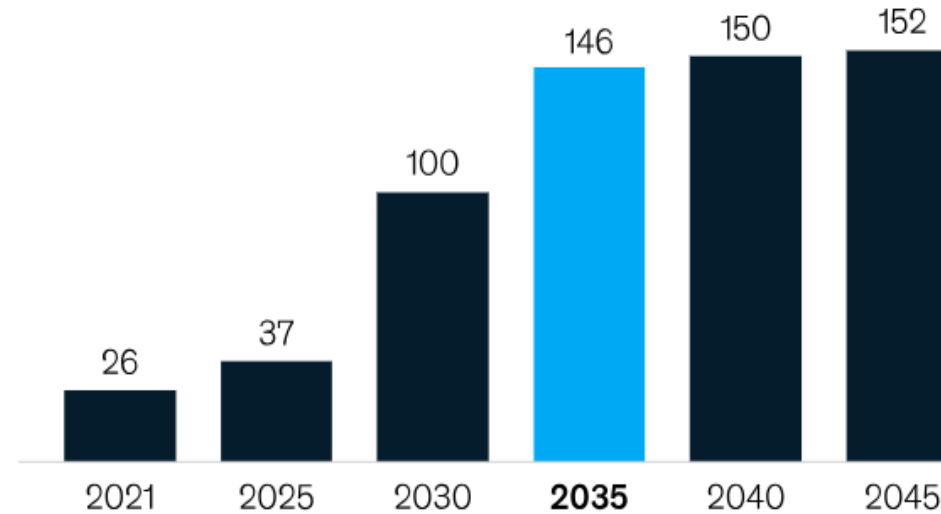
150 B\$ per year by 2035

And it is **materializing !**

SOURCE : MCKINSEY & COMPANY

Global investments in Carbon Capture technologies

\$ billions



Market forecast

7

Fresh News extract

- 13 Projects out of 44 (30%) awarded by the Innovation Fund in Europe include CCUS
- Feb-24 : EU published its new CCUS 2040 target with 280 million tons to be captured
- Apr-24 : It has been announced that the US Department of Energy will award 6 b\$ to 33 CCUS projects
- May-23 : CO280 raised 10 m\$ in SEED
- July-23 : Dioxycle raised 17 m\$ in serie A
- Feb-24 : Dotz has entered into a 12 m\$ funding agreement
- March-24 : D-CRBN awarded 2.5 m€ grant from European Innovation Council
- March-24 : Sirona Technologies is raising a 4 m€ seed round
- March-24 : US-based CarbonCapture raised 80 m\$ from Saudi Aramco, others



A Carbon Capture Technology Provider



Business Model & Value Proposal

Offer
&
Revenue
Streams



Post-Combustion **Carbon Capture Equipment Supply**



Maintenance & Repair - Long Term Services Agreement (LTSA)

- Key differentiator
- High margin recurring revenues
- Customers loyalty

Added
Value for
our
Customers



Cutting off ETS Expenditures and/or carbon-related **taxes**
Green Premium



Foster **Societal Acceptancy**



Enable **Lifetime Extension** of existing assets and avoid huge investments to replace assets

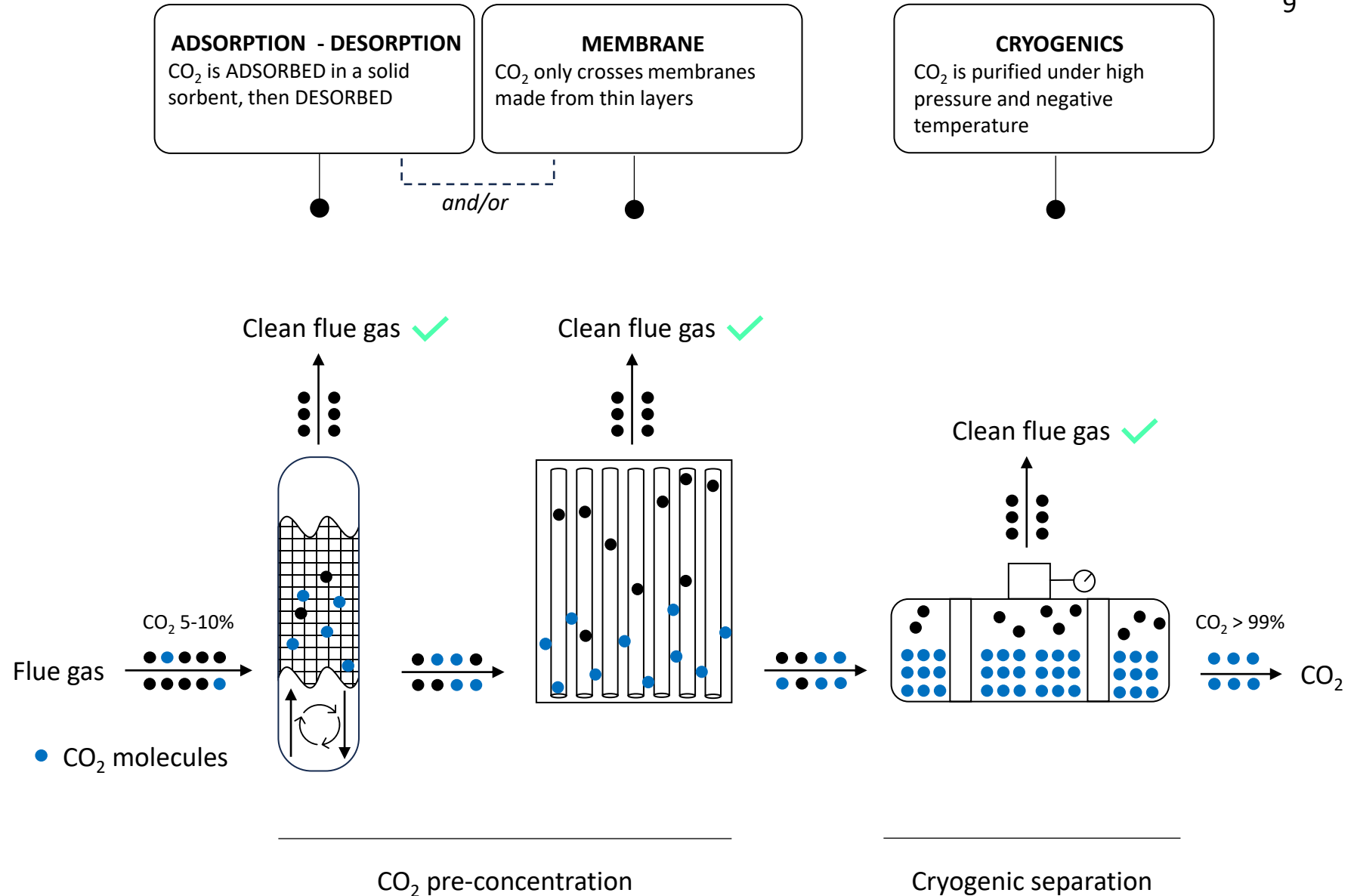
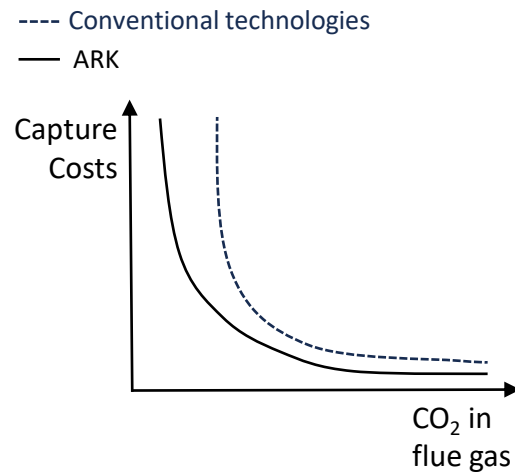


Services to ensure plant proper operation over time



How does ARK Solution work ?

Innovative flexible hybrid Technology
viable for a large range of CO₂ concentrations





Technico-Commercial roadmap

A fast development focused on **Costs** and **Flexibility**






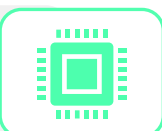




We are raising a
\$2.5m round
(can be phased)

Use of funds

11

In order to

- 1 Build our automated Pilot (size B, 100 kg per day) and Start testing (OPEX) !** 
- 2 Build a Strong Team (6 people) and rent Lab space** 
- 3 Optimize the Setup and Materials – IP Build-up & Patents** 
- 4 (Co-)Develop Best-in-class Sorbents and Membranes – IP** 
- 5 Build Partnerships with Universities, Research Centers, Suppliers and Customers** 
- 6 Become a Key Player as Technology Provider in the Carbon Capture Ecosystem** 



Our **DNA clearly differentiates** from the usual Carbon Capture players

Key differentiators

12

**Low
capture
cost**

- ❖ Hybrid solution combining key technologies strenghts
- ❖ Fit for purpose design based on Customers needs

**De-risked
technology**

- ❖ Fast upscaling development tested in real conditions
Our first unit already captures 5 kg CO₂ per day
- ❖ Strong partnerships

**Versatile
solution**

- ❖ Flexible technology suitable for low/high CO₂ concentrations
- ❖ Compatible with all plant configurations and with all CO₂ transports modes



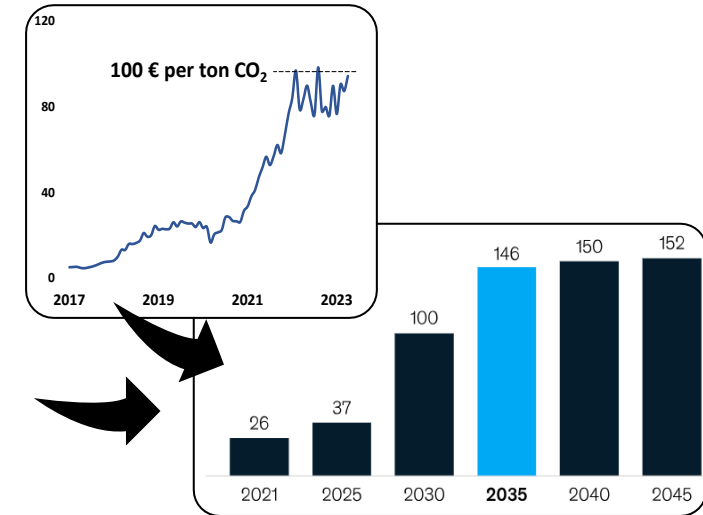
The reason why we will succeed

Us



- ❖ We know what the Customers want
- ❖ Deep Know-how & Network
- ❖ Excellent Track Record
- ❖ Impact-driven mindset

The Market



The Timing

- ❖ CO₂ Transport & Storage capacities are being built
- ❖ CO₂ « Utilization » start-ups are popping-up
- ❖ CO₂ Capture Technologies are strongly awaited !

Road to success

13

LET'S MEET !



Contacts :

samuel.thiry@arkcapturesolutions.com
aurelien.vantomme@arkcapturesolutions.com

Website :

www.arkcapturesolutions.com