



# CARBON TO VALUE INITIATIVE

## EXAMPLES OF CARBONTECH COMPANIES AND PROJECTS

USEA Carbon Conversion Workshop – Sep 27, 2022

A COLLABORATION BY

**URBAN** FUTURE LAB  
NYU TANDON



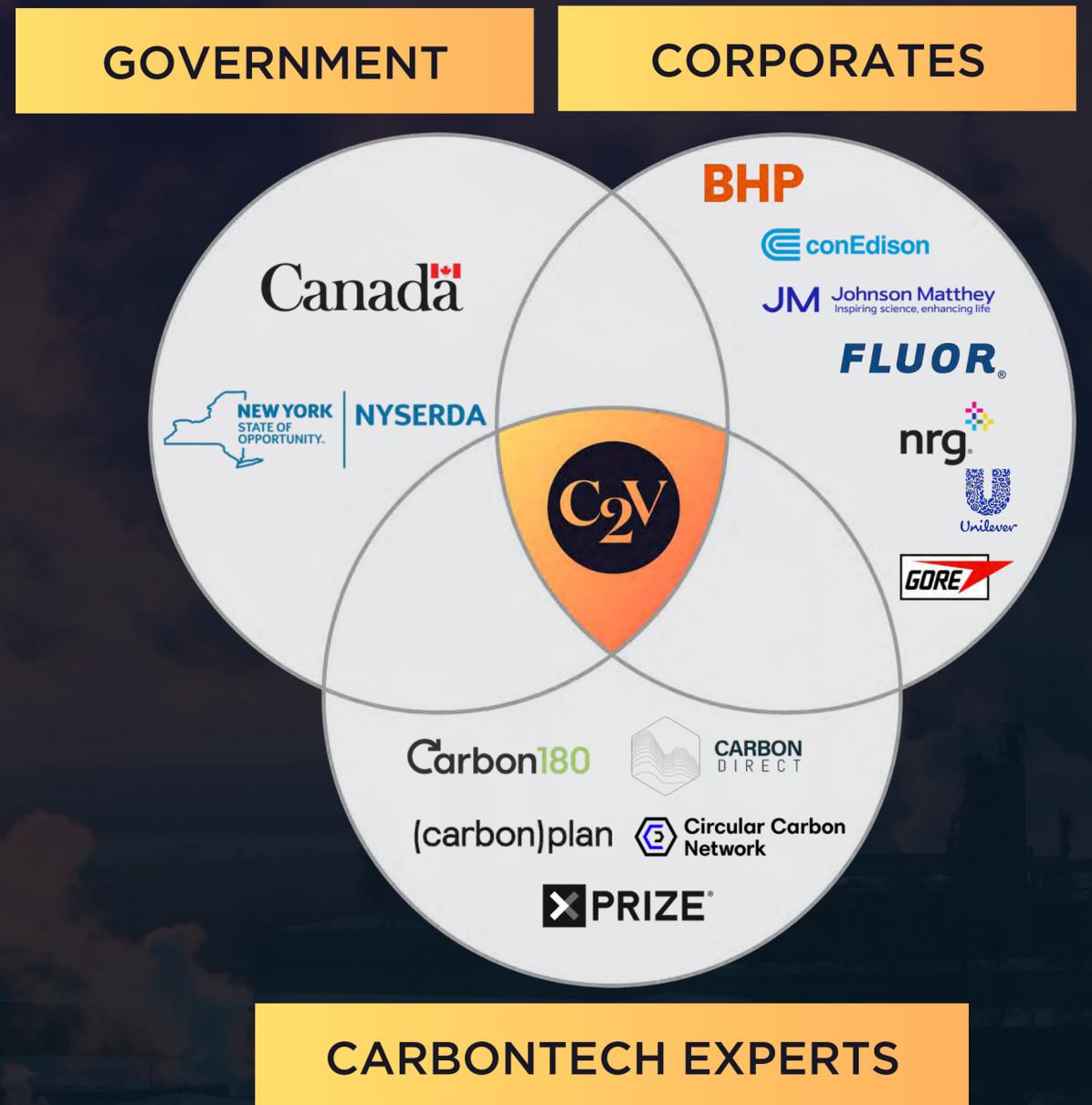
Greentown Labs



**Fraunhofer**  
USA

# WHAT IS THE **CARBON TO VALUE INITIATIVE?**

- 3-year multi-stakeholders open innovation program to catalyze carbontech
- 2 core missions
  - Ecosystem Building
  - Fostering Partnerships, esp. between startups and corporates
- Carbontech Leadership Council work closely with startups and foster commercialization opportunities



# C2V LEVERAGES A **UNIQUE PARTNERSHIP** IN THE STARTUP ACCELERATION AND CORPORATE INNOVATION SPACE



- New York City's climatetech innovation hub for clean energy, sustainable urban infrastructure, and deep decarbonization
- 87% company survival rate
- Supported 67 companies who have raised over \$895M



- Largest climatetech incubator in North America
- Locations in Somerville, MA, and Houston, TX
- Incubated over 400 companies who have raised over \$2.2B



- Global leader in applied research
- 80+ institutes and research units throughout the world
- 30,000+ staff
- \$3.5 billion annual research budget



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**NYSERDA**  
Supported

- NYSERDA is building the Carbontech industry in New York State
- Lead funder of this initiative and leverages private sector financing
- NYS is leading the globe through the Climate Leadership and Community Protection Act of 2019

# WHY CARBONTECH



**TRILLION  
DOLLAR**

MARKET  
OPPORTUNITY



**CRITICAL TO  
AVOIDING 2°C**

OF GLOBAL  
WARMING



**WHITE SPACE  
FOR INNOVATION**

GAINING TRACTION  
WITH MAJOR  
INDUSTRY ACTORS

# CARBONTECH IS PART OF A BROADER SUITE OF CARBON MANAGEMENT SOLUTIONS

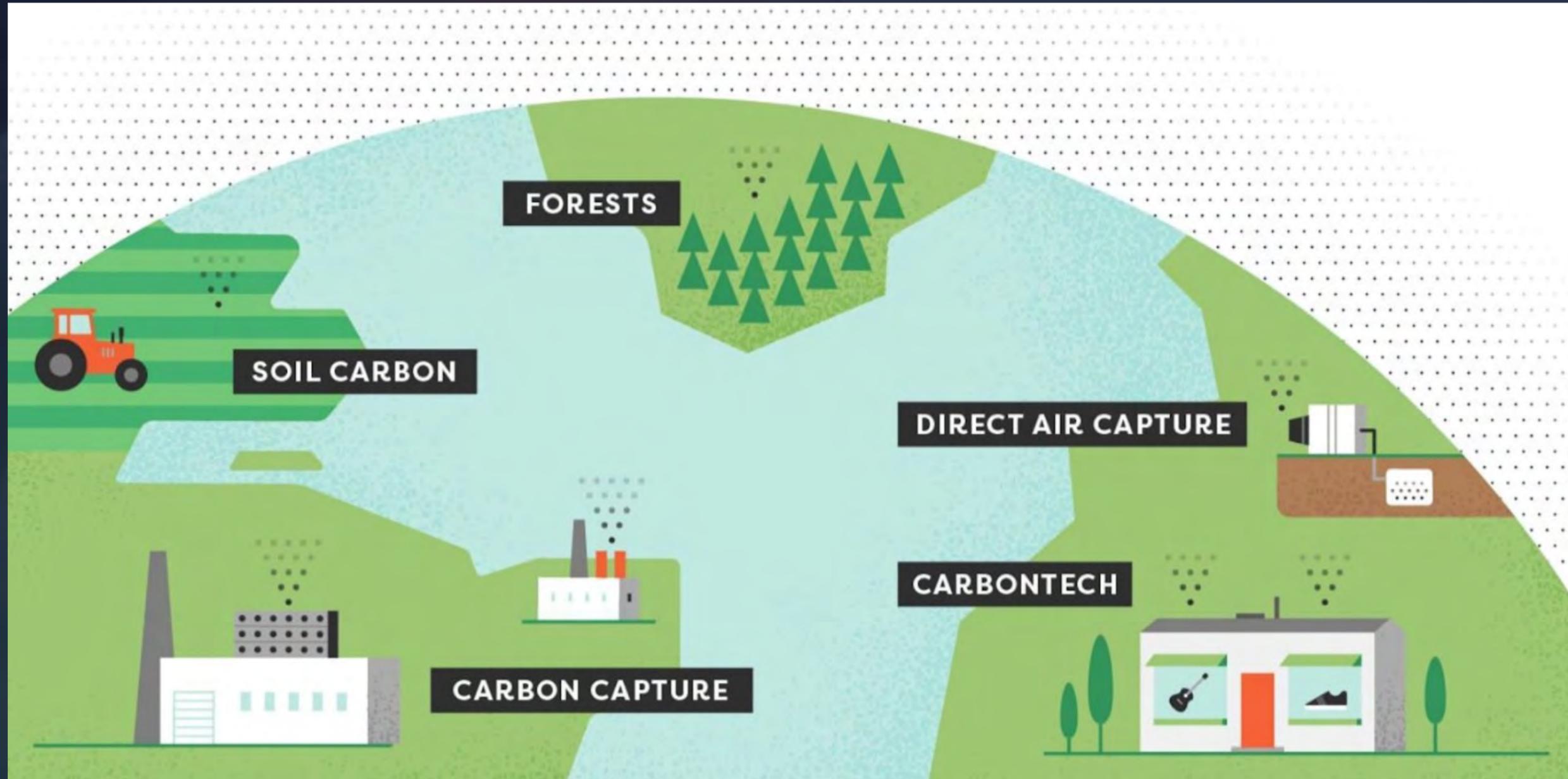


Image credit: Carbon180

# THE CARBONTECH INNOVATION LANDSCAPE IS **COMPLEX AND EVOLVES RAPIDLY**

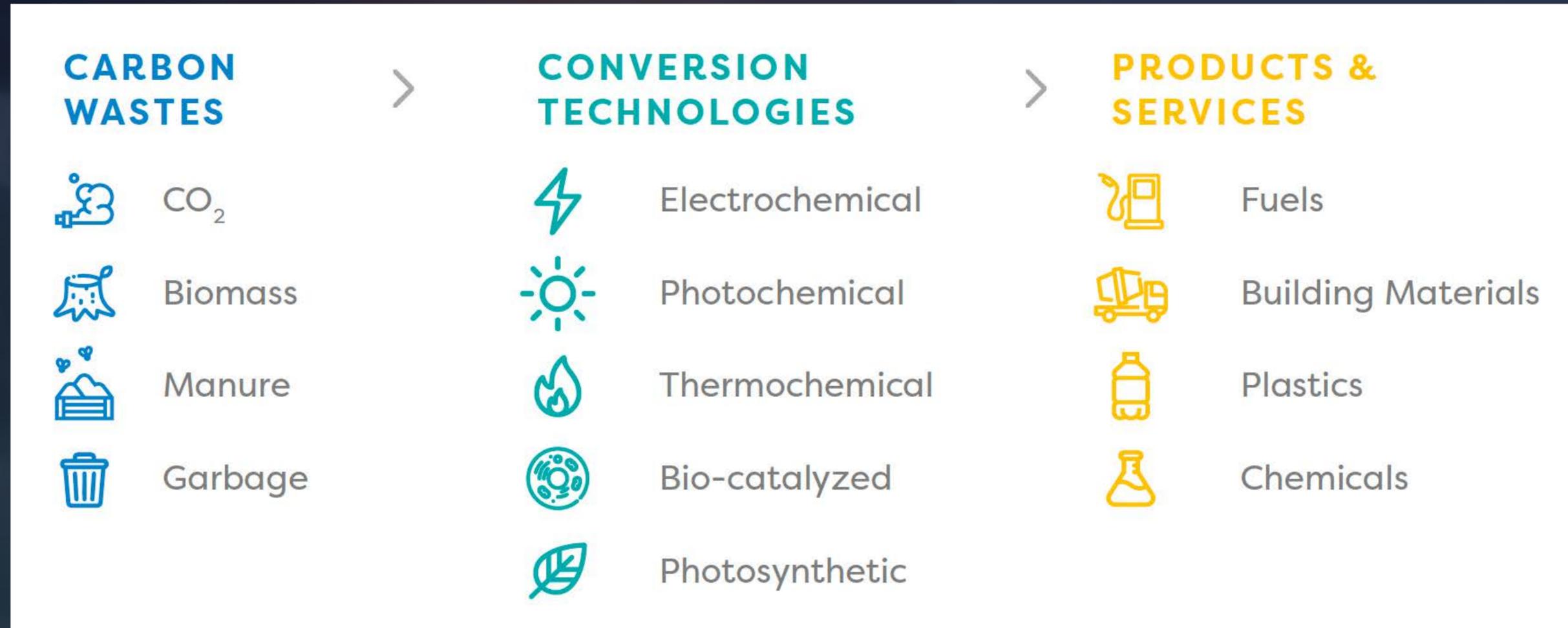


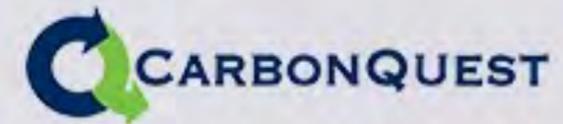
Image credit: Carbon180

# C2V YEAR 1 COHORT COMPANIES

AIR COMPANY.



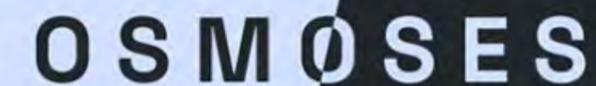
CARBONFREE



Patch

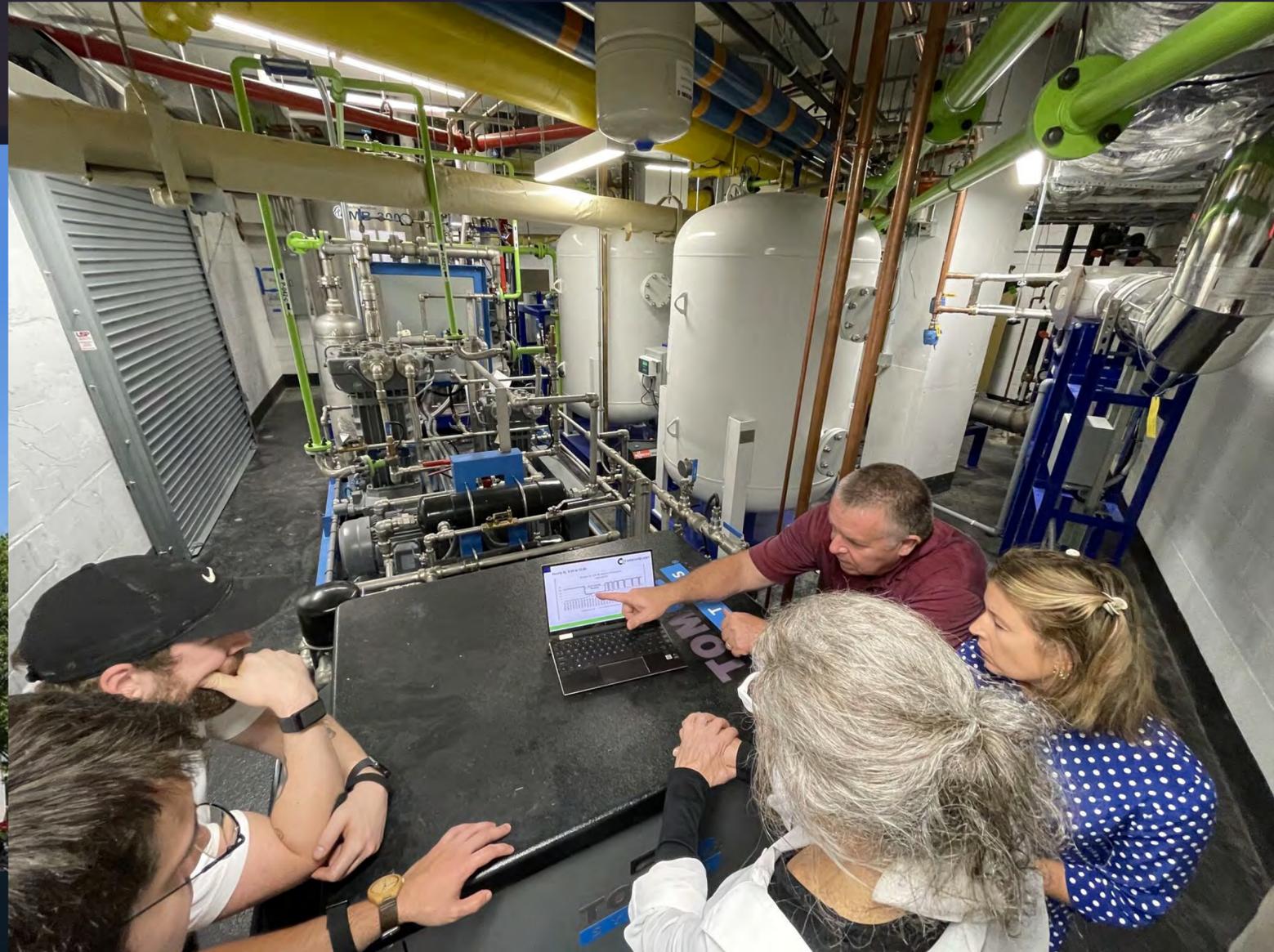


# C2V YEAR 2 COHORT COMPANIES



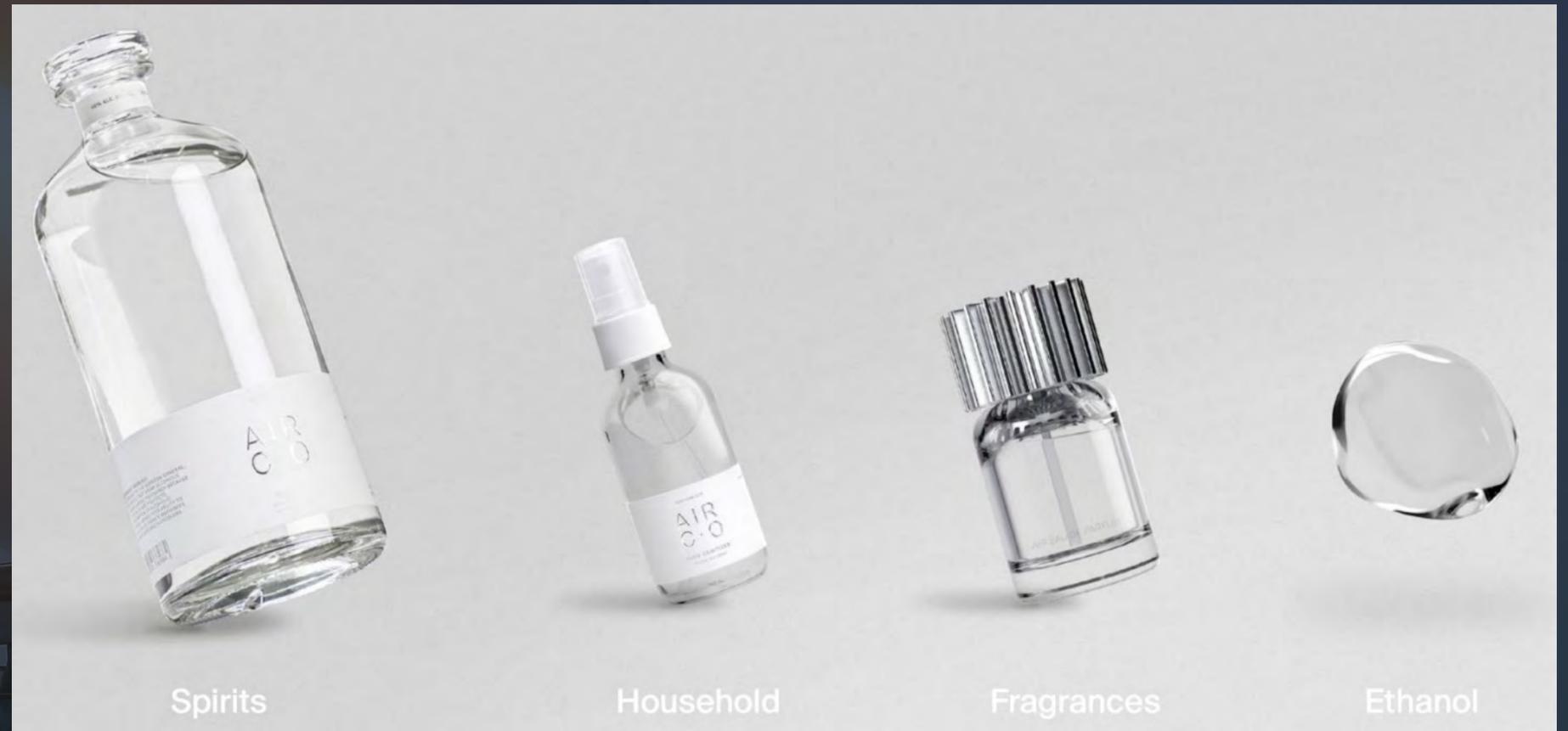


# CARBONQUEST **DECARBONIZE** **BUILDING HEAT** THROUGH CARBON CAPTURE



AIR COMPANY

# AIR COMPANY PRODUCES ETHANOL AND METHANOL FROM CO2 AND HYDROGEN

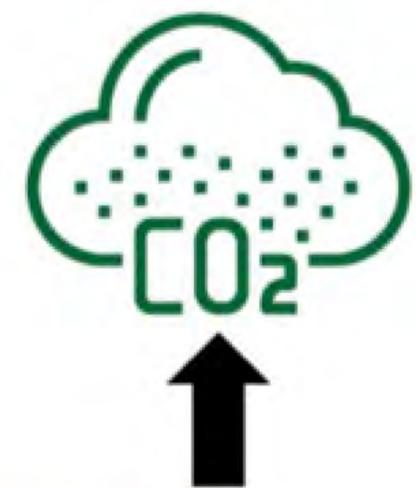


# CarbonFree Offers a Full CCUS Solution Based on Mineralization

*CarbonFree "consumes" emissions from an external stationary point source...*

*...decarbonizes and mineralizes the CO<sub>2</sub> in the SkyCycle ...*

*...to sell the products in the market or to store it permanently...*



PCC  
Precipitated Calcium Carbonate



- Utilizes established chemistry and adds the CarbonFree patented process solution
- On-site decentralized solution with modular global applicability

- Non-hazardous, benign specialty chemical
- SkyCycle Gen 2 PCC is high-purity and carbon negative with a wide range of applications

Credit image: CarbonFree

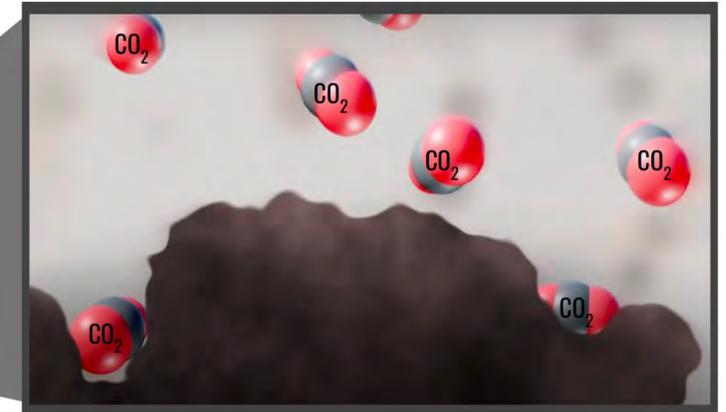
# CARBON UPCYCLING TECHNOLOGIES CONVERTS SOLID WASTE AND CO<sub>2</sub> TO BUILDING MATERIALS



Low-purity flue gas from  
industrial point sources



Proven compatibility  
with over 30 industrial  
waste by-products



Captured carbon locked  
into additive materials

# TAKE HOME **MESSAGES**

- We have emitted 1.6 Trillion of CO2 since 1750 (stock) and we emit 36 billion of additional CO2 per year (flow) – opportunity to change the paradigm from CO2 as a waste to CO2 as a resource
- Wide range of approaches: feedstock / process / product combinations
- Economics of today <> economics of tomorrow
- Stay informed and involved with the Carbon to Value Initiative: subscribe <https://www.c2vinitiative.com/subscribe>



# CARBON TO VALUE INITIATIVE

# THANK YOU



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