



CLIMEWORKS

Capturing CO<sub>2</sub> from air

Caltech Symposium  
Plan B: Engineering a Cooler Planet

09 December 2017

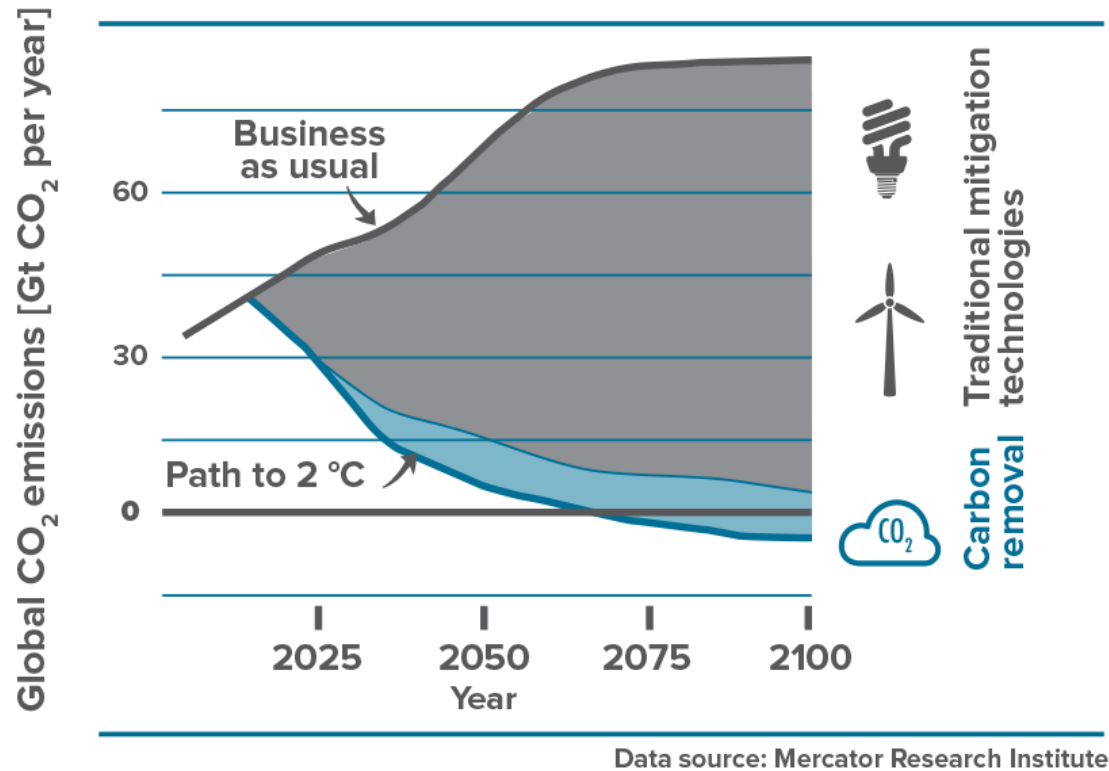
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# WHY DIRECT AIR CAPTURE OF CO<sub>2</sub>



How to keep global warming below 2 °C.

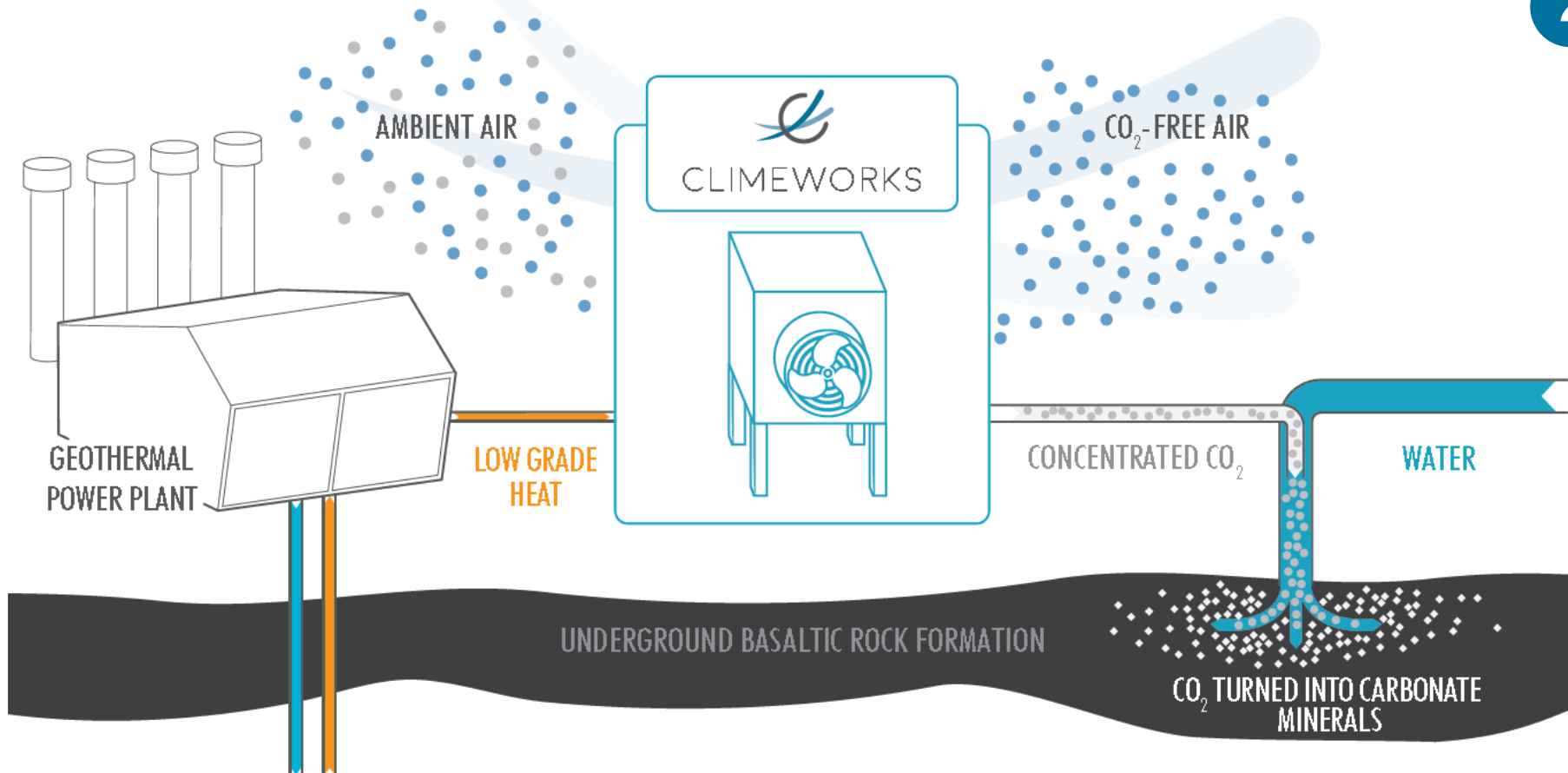


**87%** of IPCC modeling scenarios consistent with **2 °C of global warming** involve large scale deployments of CO<sub>2</sub> removal from air.

# CO<sub>2</sub>-REMOVAL VIA DIRECT AIR CAPTURE



- 1 CO<sub>2</sub> is captured directly from the air using renewable, e.g., geothermal energy



- 2 CO<sub>2</sub> is pumped underground at favorable CO<sub>2</sub> storage sites, e.g. Iceland.

- 3 CO<sub>2</sub> reacts with underground rock formations and is mineralized. Thereby CO<sub>2</sub> is bound permanently and safely, reducing the CO<sub>2</sub>-content of the atmosphere.



# CO<sub>2</sub>-REMOVAL FLAGSHIP PROJECT



<b>Plant type:</b>	DAC-1
<b>CO<sub>2</sub> capacity:</b>	100 kg/day
<b>CO<sub>2</sub> application:</b>	Mineralization of CO <sub>2</sub> → atmos. CO <sub>2</sub> removal
<b>Heat source:</b>	Geothermal
<b>Location:</b>	Hellisheidi, Iceland
<b>Commissioning:</b>	11 <sup>th</sup> Oct. 2017

**Worldwide first atmospheric CO<sub>2</sub>-  
removal via DAC**

# GREENHOUSE FLAGSHIP PROJECT

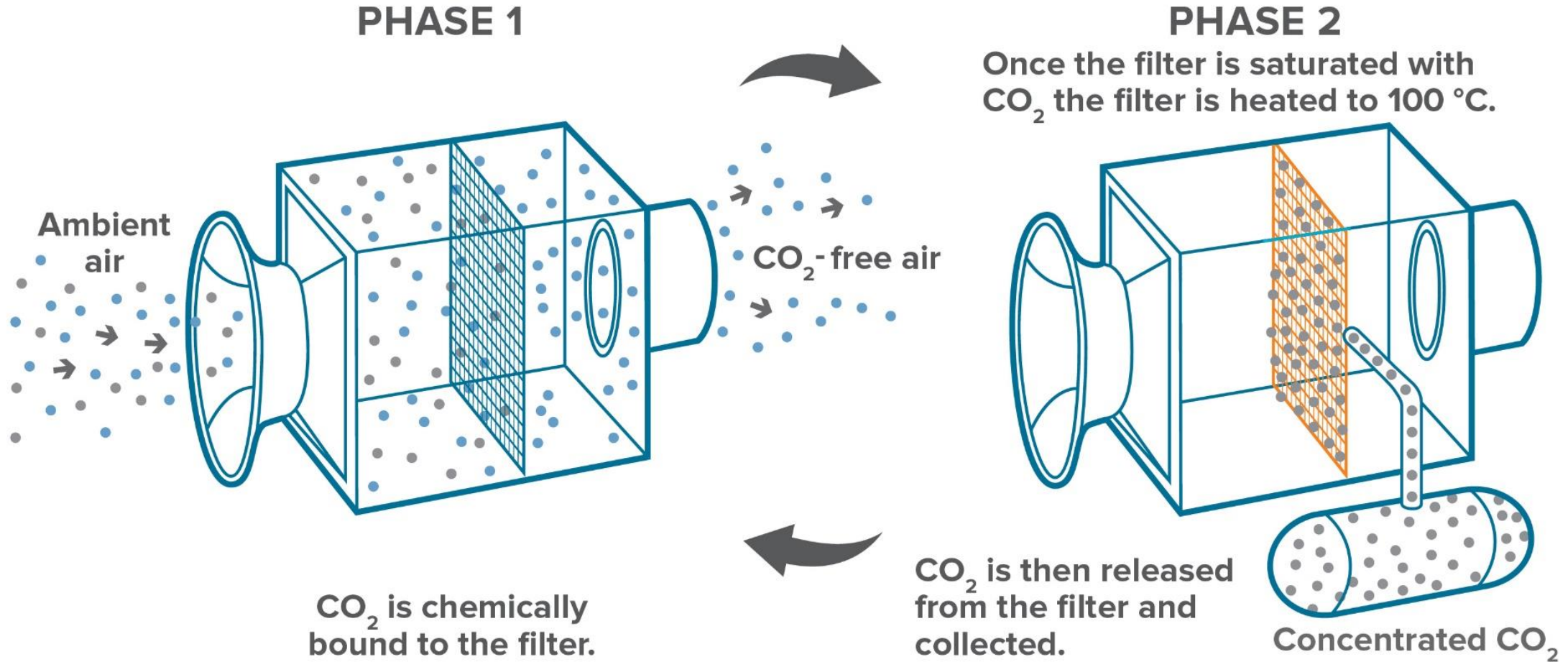


<b>Plant type:</b>	DAC-18
<b>CO<sub>2</sub> capacity:</b>	2'460 kg/day
<b>Customer:</b>	Greenhouse
<b>Heat source:</b>	Waste heat
<b>Location:</b>	Hinwil, CH
<b>Commissioning:</b>	31 <sup>st</sup> May 2017

**Worldwide first commercial DAC plant**



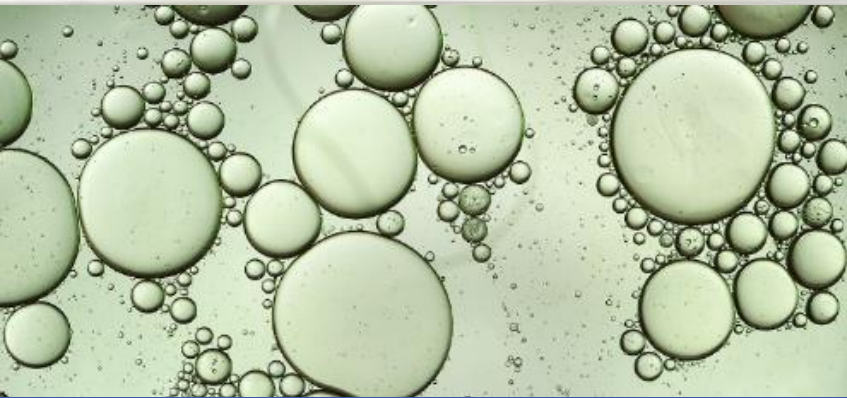
# HOW OUR TECHNOLOGY WORKS





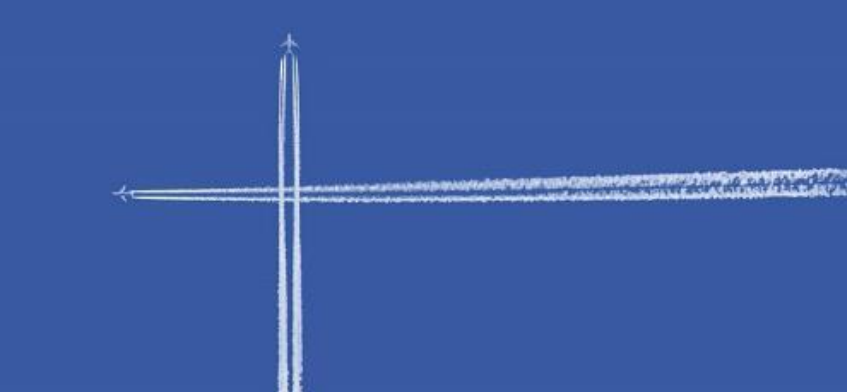
## FOOD, BEVERAGE & AGRICULTURE

- CO<sub>2</sub>-supply for bottlers, greenhouses, etc.



## RENEWABLE FUELS & MATERIALS

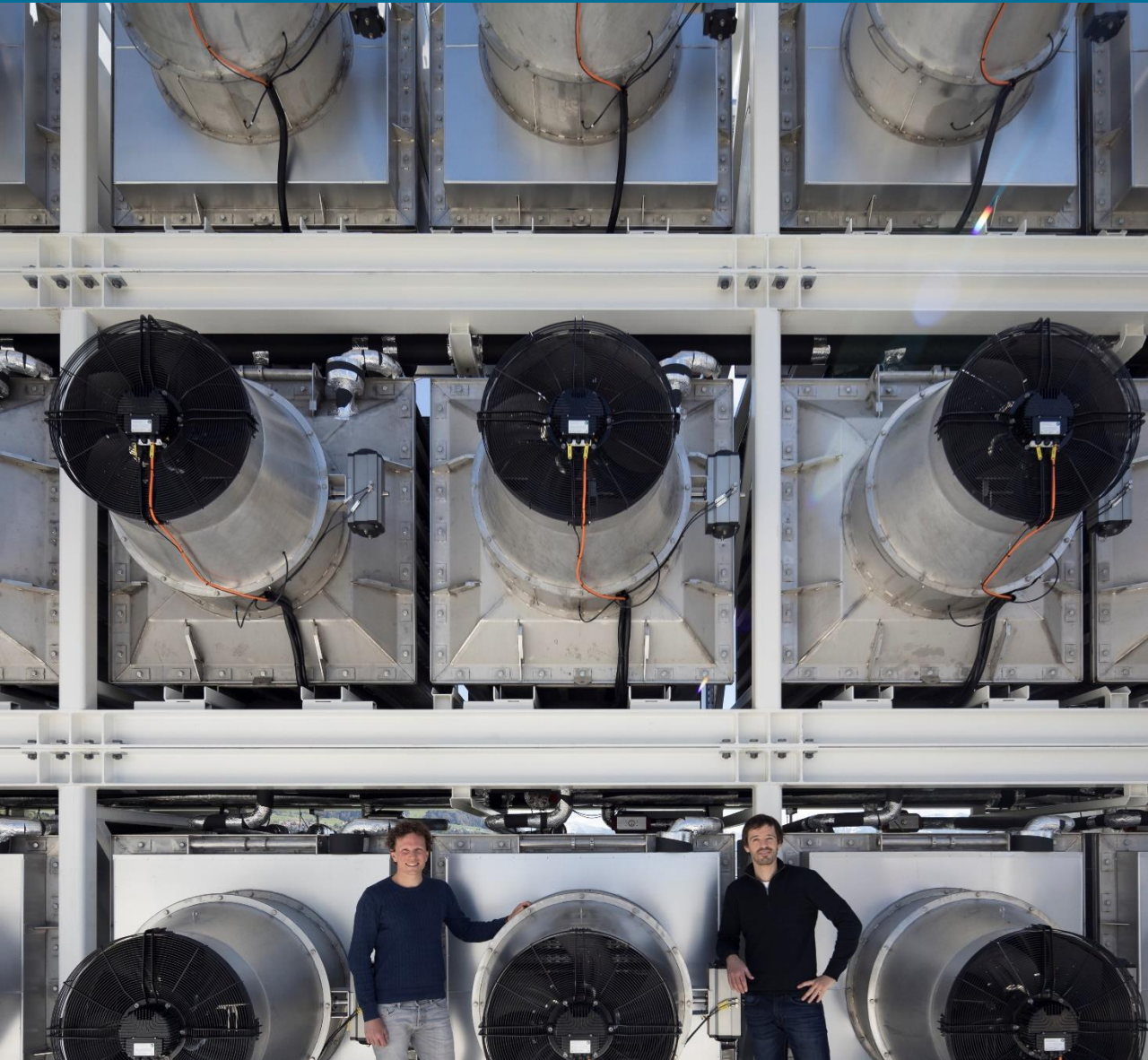
- CO<sub>2</sub>-supply for renewable fuel or material synthesis



## CSR, ENVIRONMENTALLY CONSCIOUS CUSTOMERS

- Large-scale CO<sub>2</sub> removal from air





- Founded 2009 as spin-off of ETH Zurich
- 50 FTE, largest team of experts in the field
- Headquarter in Zurich, Switzerland; subsidy in Germany
- Raised over \$22M through equity and grants to date and

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