The Power of Perspective: Shaping Environmental Futures Through Collaboration

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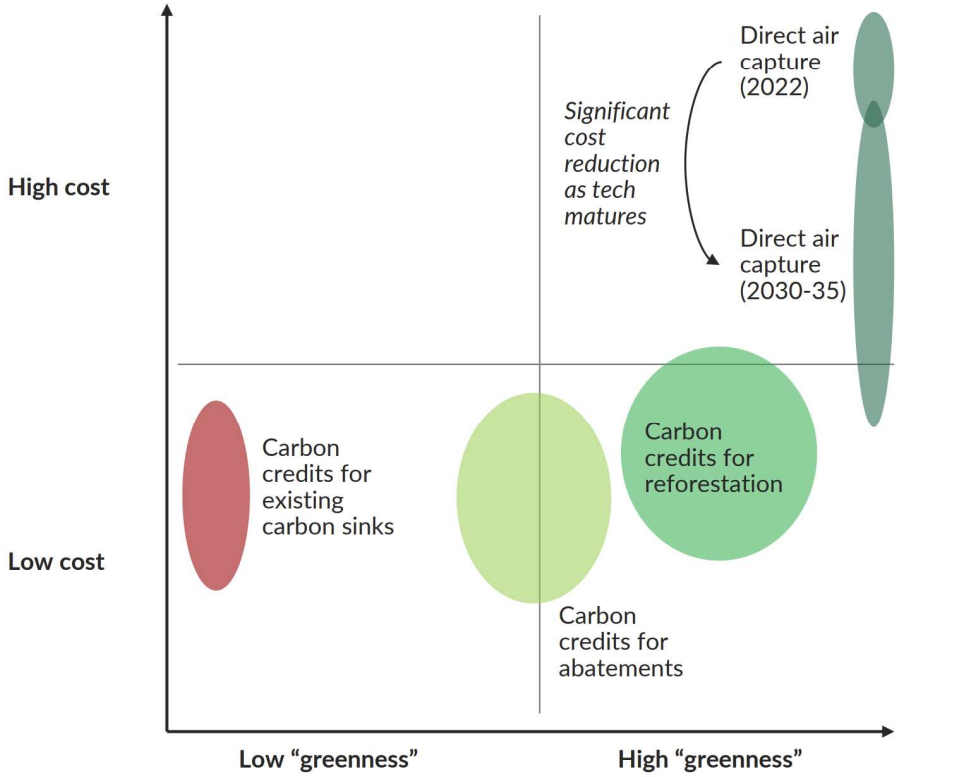
Sources of offsets: Companies should pursue a mix of carbon credits with additionality, shifting over time towards neutralization credits

Recommended approach based on "greenness" and cost

Relative "green-ness"	Type of credit / offset	"Greenness" attributes	Description
Low	Carbon credits for existing carbon sinks	Limited, does not satisfy additionality	Credits for existing carbon sinks such as national forests that are permanently protected
High	Carbon credits for abatements	Additionality, compensation	Abates (avoids) future emissions by subsidizing renewable energy, electrification, cleaner cooking fuel, changes to agricultural practices, etc.
Very high	Carbon credits for reforestation	Additionality, neutralization, long time lag (10-30 years), risk of release	"Neutralization" credit that removes carbon from the air (and sequesters it in biomass) by financing reforestation, rehabilitation of ecosystems, etc.
Max	Direct air capture credits	Additionality, neutralization, occur rapidly, very long-term storage (100s or 1,000s of years)	"Neutralization" credit that removes carbon from the air and sequesters it, (typically underground); currently extremely expensive but cost expected to fall by 50-90% as tech scales

Recommend that companies pursue mix of high "greenness" credits, similar to leading net zero corporates (see case studies on following slides)

Carbon credits and offsets: **relative cost vs. relative "greenness"**



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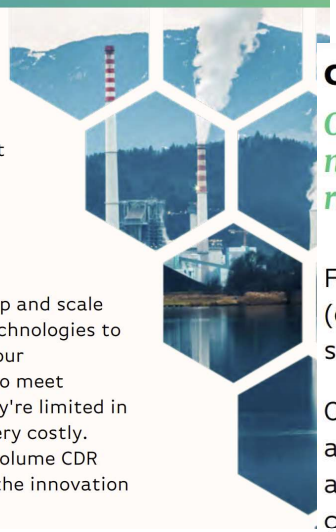
CLIMATE VAULT

Founded at the University of Chicago, Climate Vault is an award winning non-profit that is **solving the world's need** for trustworthy voluntary carbon reductions options and **fostering innovation** in Carbon Dioxide Removal (CDR) technologies.

Increasing Demand for Climate Action

A growing number of organizations are making net-zero pledges to reduce their carbon emissions. As of October 2021, 33% of the largest public companies in G20 countries have made net-zero pledges, up from 20% just one year ago. This activity is causing explosive growth in the demand for credits in the Voluntary Carbon Market (VCM), with the volume on pace to triple from 104 million tons in 2019 to over 300 million tons in 2021 with predictions of 1-2 billion tons/year by the decade's end.



The Risks of Traditional Offsets

This growing demand is struggling to find high-quality supply in traditional VCMs. Carbon offsets have long faced challenges of measurability, price opacity, and verifiability, which has let to greenwashing. For the select credits that can overcome these challenges, there is little confidence that they can scale to meet the increase in demand.

CDR - Critical but Nascent

There is a critical need to develop and scale carbon dioxide removal (CDR) technologies to tackle historical CO2 already in our atmosphere. CDR is imperative to meet science-aligned targets, but they're limited in scale, highly fragmented, and very costly. History teaches us that a high-volume CDR market is necessary to unleash the innovation that is urgently needed.

Climate Vault's Solution

Our award-winning approach leverages markets to credibly neutralize emissions while supporting innovative carbon dioxide removal (CDR) technologies.

Faced with the mounting credibility issues of traditional offset projects (e.g. tree planting, clean cookstoves), Climate Vault set out to provide a superior solution to fight climate change.

On behalf of its donors, Climate Vault purchases carbon allowances (1 allowance = 1 metric ton) on government-regulated compliance markets and takes them off the market. By removing the allowances from circulation, polluters cannot use them and this creates an immediate, verifiable CO_2 offset/reduction. Compliance markets offer the benefits of price transparency, government enforcement, verifiability, and scale that cannot be matched by the Voluntary Carbon Market.

Climate Vault will then identify innovative carbon dioxide removal (CDR) technologies that can remove historical CO2 from our atmosphere, and use the value of the allowances to purchase an equivalent amount on behalf of our donors.

CDR technologies must be vetted and approved by our world-class Tech Chamber, which includes faculty from MIT, Princeton, Harvard, Scripps, and the University of Virginia. The Tech Chamber is chaired by former US Energy Secretary, Ernest Moniz.

Sloan Products that are Carbon Neutral

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https://www.sloan.com/sustainability-and-wellness/products/carbon-neutral-products

Smart Buildings

Most building water measurements come from meters in the building measuring water consumption and wastewater measurements for measuring water leaving it.

No measurement of waters at point of use, stagnation, contaminants, etc leading to potential to human health impacts

https://www.awwa.org/Portals/0/AWWA/Government/20201001FrameworkforBuildingManagersFINALDistCopy.pdf

Telecommunications Industry Association Launch SPIRE 2.0 To Enhance Smart Building Performance In Cybersecurity, Connectivity And Sustainability

SPIRE 2.0 provides a comprehensive smart building assessment to help owners and operators improve tenant satisfaction and increase asset value.

$215 BILLION BY 2030

The global Smart Building market is expected to grow to $215 billion by 2030 according to reports from Verified Market Research.

WHAT IS A SMART BUILDING?

The concept of a smart building has evolved over time. However, true smartness can only be achieved when all building systems are seamlessly integrated and share data, allowing them to be effortlessly managed through a single interface with minimal human involvement.

https://tiaonline.org/press-release/ul-solutions-and-the-telecommunications-industry-association-launch-spire-2-0-to-enhance-smart-building-performance-in-cybersecurity-connectivity-and-sustainability/

SC Argus™ Pro – Connected Restroom

- Labor and Time savings
- Hygiene, health aspects
  - Line flush
  - Warm / hot water available early mornings
  - Hygiene ratios (faucet to toilet activations)
- Swift issue resolution through alarms, diagnostics
- Value of reports, usage trends & information
- Developed API to integrate data into BMS

Final Summary

Whether you are developing a carbon-neutral building or looking to develop a net-zero water project, Sloan is here to work together with you!