

Unraveling the world of climate tech venture investing



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Time is Now

“The next 1,000 unicorns won’t be search engines or social media companies, they’ll be sustainable, scalable innovators – startups that help the world decarbonize.”

- Larry Fink, BlackRock

“There will be eight or ten Teslas in the climate tech space... and the gains will be spread out over a wider swath of companies..”

- Bill Gates, Microsoft

“In too many parts of the world, nature is already flipping from a carbon sink to a carbon source. This is a profound danger to us all. We must conserve what we still have, we must restore what we’ve lost and we must grow what we need to live without degrading the planet for future generations to come.”

- Jeff Bezos, Amazon

The climate challenge

6 of top 10 global risks are climate-change related.
(World Economic Forum)

1.5°C target is not achievable.

Inaction Today will cost unimaginably more Tomorrow.

→ **2x** more CO₂e in permafrost than in atmosphere today. The poles are warming up the fastest.

→ Intense droughts, storms, heat waves, warming oceans will destroy biodiversity, people's livelihoods and communities.



TOP 10 GLOBAL RISK BY 2033

2 years



10 years

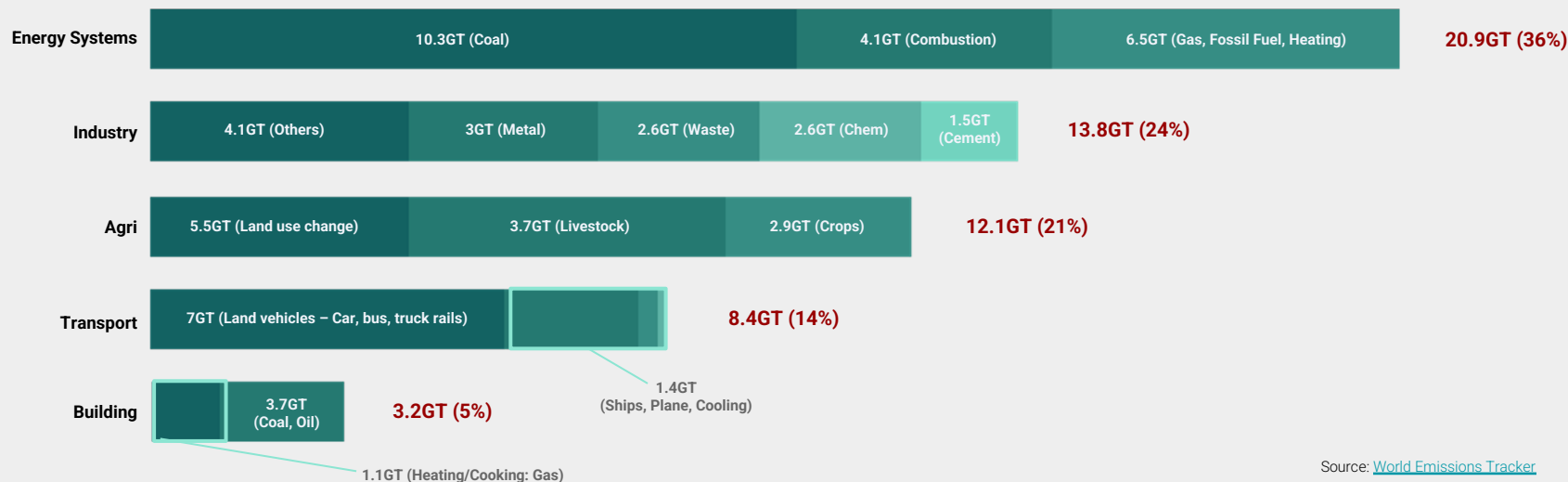


Risk categories

■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

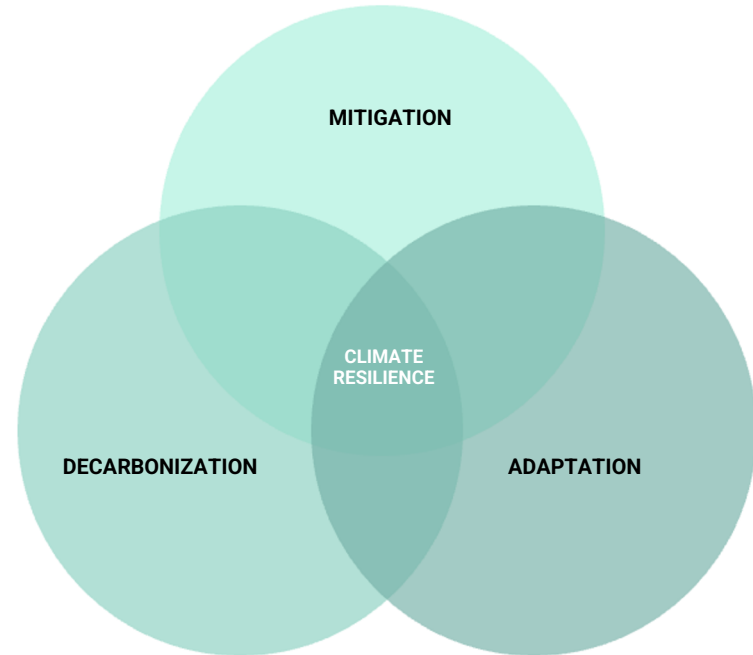
Source: World Economic Forum, Global Risks Perception Survey 2022-2023

GHG EMISSIONS BY SECTOR – 58 GT in 2022, still rising



Source: [World Emissions Tracker](#)

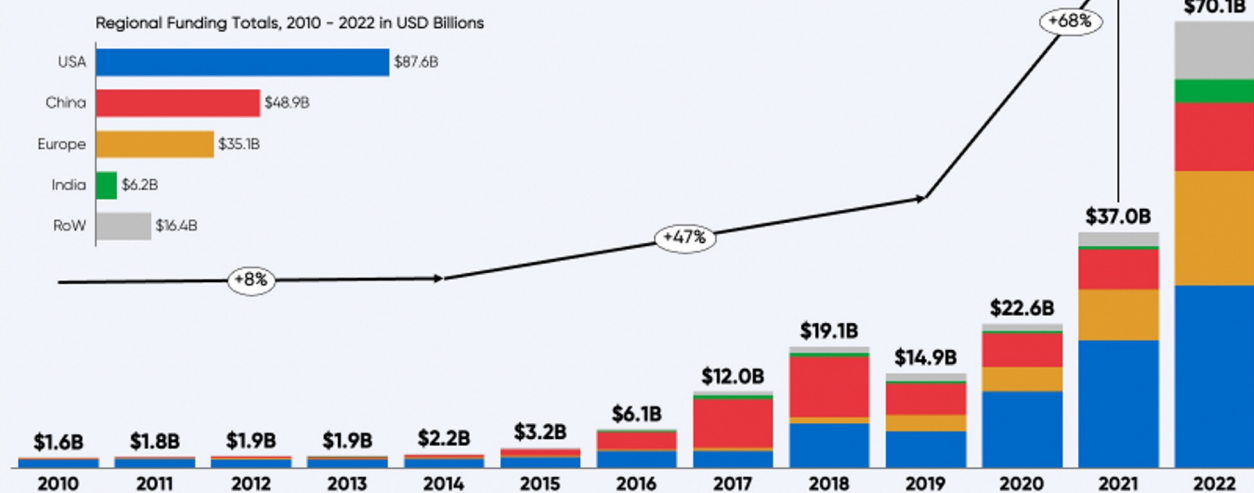
- **\$200T** of investments to 2050 to reach a net zero scenario. (\$7T/year)
 - ◆ Across decarbonisation, mitigation and adaptation.
 - ◆ Partnerships between public, private and philanthropy required.
- We will not be able to do it without catalytic investments in scientific and tech innovation.
- The time is now!



Climate tech venture funding up c. 40x since 2010

\$70.1B of Climate Tech Venture Funding for 2022, up 89% on 2021.
Expect 2023 to moderate, but still exceed 2021 investment levels.

Global Climate Tech Venture Capital Funding, 2010 - 2022 in USD Billions

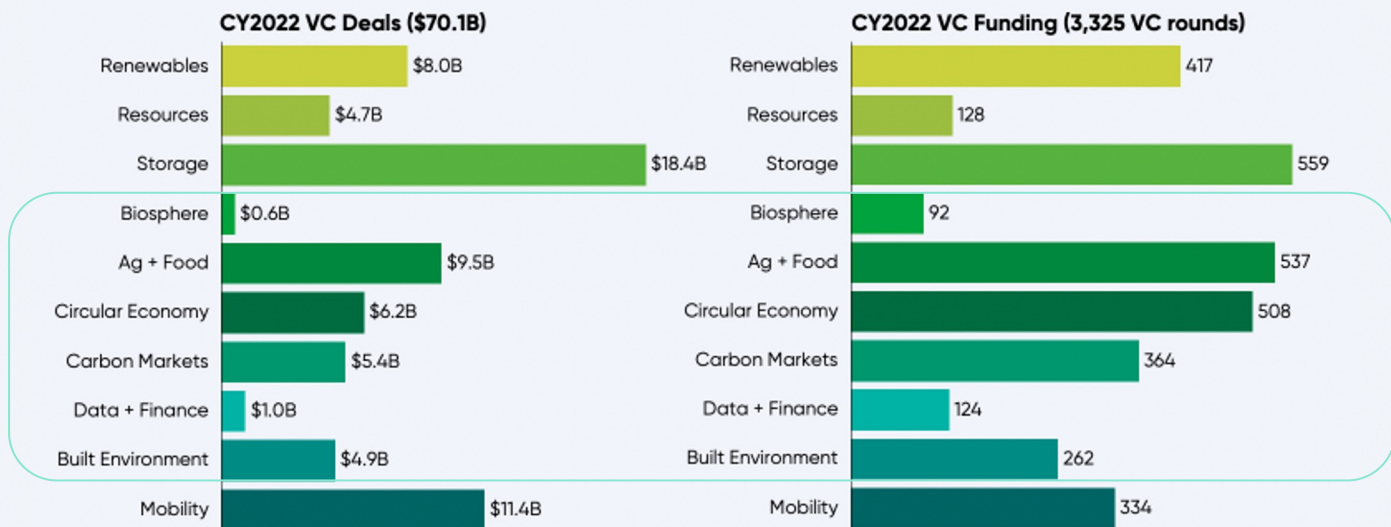


Holon IQ

Source: HolonIQ, 2 Jan 2023. All numbers rounded and may not sum exactly due to rounding. Excludes PE transactions. All years calculated at historic FX (spot rate on funding date)

\$70.1B & 3,300+ deals in Climate Tech Venture Funding for 2022. Energy Storage/Distribution & Mobility continue to dominate the mega rounds.

Global Climate Tech Venture Capital Funding, 2010-2022 in USD Billions and number of funding rounds.



Paradigm shift - reasons to be optimistic

Technology

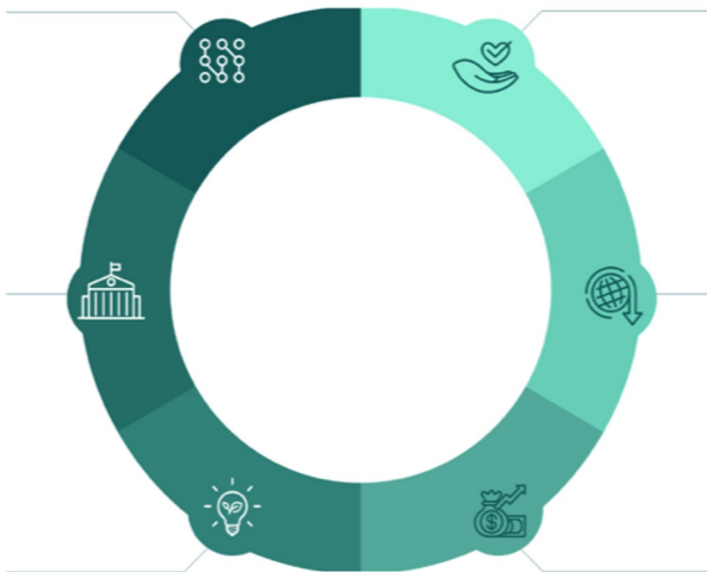
Unlocking opportunities previously unattainable from AI to Carbon Capture to Synthetic Biology.

Government

121 nations accounting for almost half the world's GDP are committed to net zero carbon by 2050 (EICU London). Regulation and tax are forcing change in behaviours.

Talent

Founders are on a mission to reverse climate change and transform new multi-billion dollar industries while doing so.



Society

Consumers are voting with the hearts, minds and wallets with purchasing decisions.

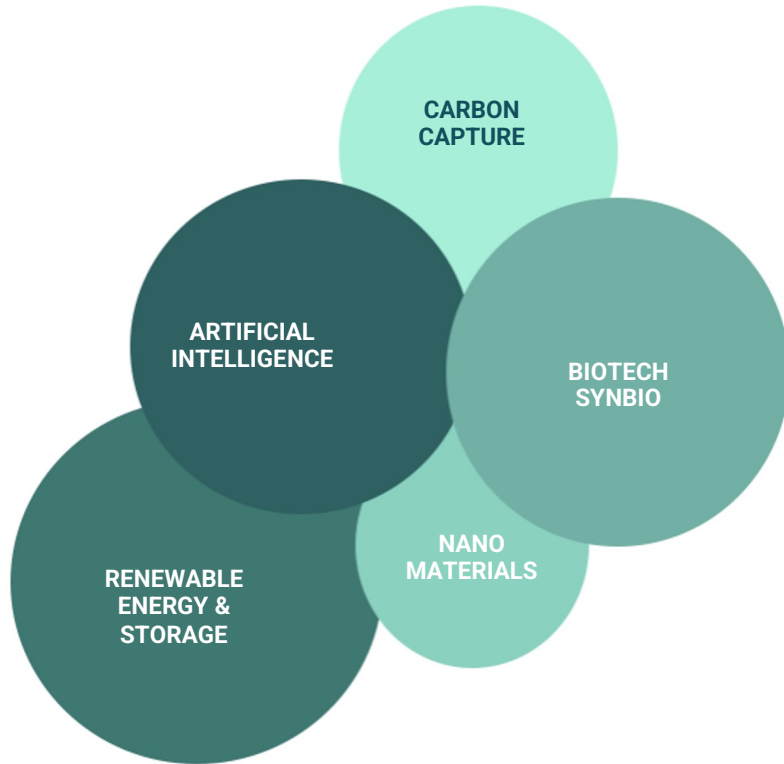
Corporate

Global companies with over 11 trillion in revenues have committed to net zero, and pledged to halve global emissions by 2030 (UN).

Funding

Trillions have been raised to drive climate action/outcomes from board rooms, underwrite runway for early-stage businesses, and create meaningful exit avenues.

Convergence of mega tech and scientific trends



NEW ENERGY SOURCES – Geothermal, fusion (holy grail)

REIMAGINING BUILT WORLD – Climate friendly materials

PRECISION AGRICULTURE – Crop protection, biodiversity

CARBON CAPTURE + UTILISATION – DAC, land/sea CDR pathways

BIOREMEDIATION – Wastewater treatment, extraction of heavy metals

ENABLERS/ADAPTATION – Software, satellite monitoring, circularity

Synbio Portfolio Examples



DECARBONIZING THE CHEMICAL INDUSTRY FOREVER

Chemicals production accounts for >10% of GHG emissions.

Solugen use AI to engineer enzymes to make carbon negative industrial chemicals by upcycling food waste and replacing petrochemicals.

- ▶ \$100mn ARR and very high margins from their first Bioforge facility
- ▶ US\$200M [Series D](#) in 2022 at valuation of >US\$2 billion.
- ▶ #2 of "World's 50 Most Innovative Companies, 2022" by [Fast Company](#).
- ▶ "Builders + Innovators of 2022" by [Goldman Sachs](#) and Tech Pioneers by WEF.



PROGRAMMABLE MICROBES TO REDEFINE AGRICULTURE

Chemical pesticides are destroying soil health and biodiversity.

Robigo bioengineer microbes into "molecular vigilantes", which have the multiple benefit of:

- ▶ Protect crops against diseases, replacing toxic pesticides
- ▶ Enriching soil health and biodiversity
- ▶ can make crops climate resilient (flooding, draughts, etc)

Recently raised oversubscribed US\$8M Seed round.

Founder recognized as Top 10 Synbio Woman Founders in Forbes.

CO2 Utilisation Portfolio Examples



INDUSTRIAL
PHOTOSYNTHESIS

Without carbon capture and utilization net zero can not be achieved

Twelve is a carbon transformation company turning CO2, water and green energy into jet fuel or plastics applying electrocatalysis technology.

▶ US\$130M [Series B](#) in 2H 2022

▶ Signed deals with Alaska Airlines, Mercedes and P&G for product testing

▶ Named "Best Invention of 2022" by [TIME](#) Magazine.

▶ #3 of "World's 50 Most Innovative Companies, 2022" by [Fast Company](#).

▶ Top 12 "Climate Innovations" by [Bloomberg NEF](#) for 'Decarbonizing Aviation'.



CARBON NEGATIVE
CONCRETE

Concrete production accounts for 6-8% of GHG emissions

CarbiCrete makes carbon negative concrete by replacing limestone with steel slag (waste product) and injecting CO2 at the end

Key benefits:

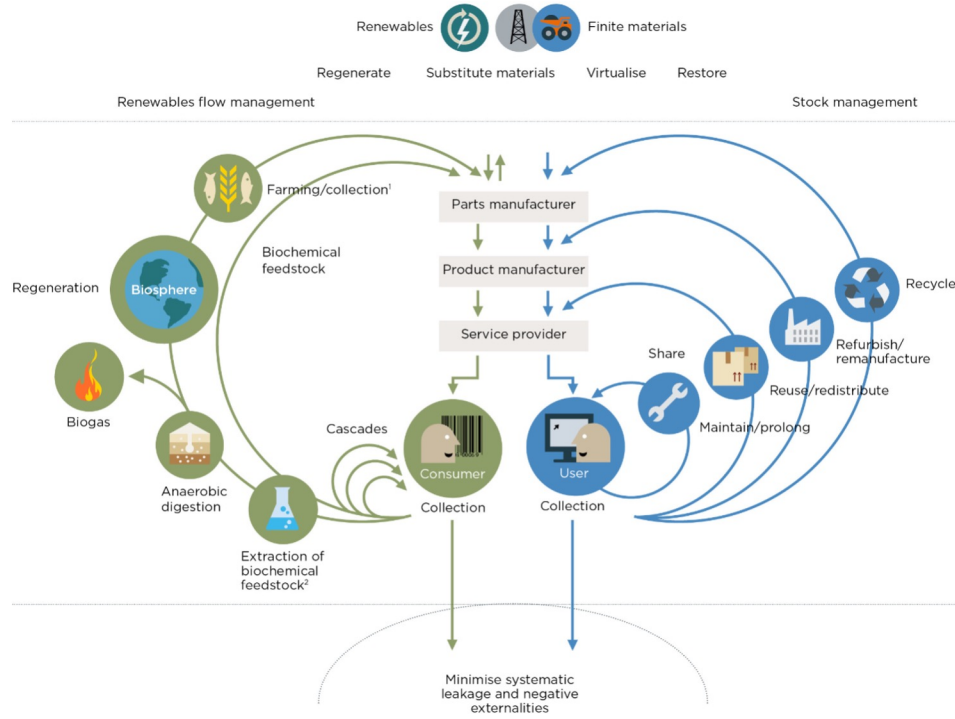
▶ stronger, cheaper than current and cures in 1 day (vs 4 weeks)

▶ can retrofit in existing facilities

▶ not only abates, but also sequesters CO2

Raise US\$18M Series A round in 2022 - St. Gobain one of the backers.

Circularity to become mainstream



AERA VC PORTFOLIO EXAMPLES	
	Plant waste → Green chemicals
	Recycling CO2 → Sustainable fuels
	Steel slags → Emissions free concrete

Future of VC is Climate Native

World's Most Innovative Companies*

2018 WINNERS

SOFTWARE AND PLATFORM LED

- 01 Apple**
For delivering the future today
- 02 Netflix**
For mastering the smallest screen
- 03 Square**
For extending the benefits of banking



2022 WINNERS

CLIMATE LED

- 01 Stripe**
For kick-starting the carbon-removal industry

- 02 Solugen**
For devising an emissions-free way to turn sugar into industrial chemicals

 Aera VC Portfolio

- 03 Twelve**
For turning the tide on petrochemicals

 Aera VC Portfolio

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* Fast Company Awards



THANK YOU

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