Climate tech: Bridging the gap between innovation and impact

September 14, 2023

CLIMATE

The New York Times

GIVE THE TIMES Account

Climate Report Card Says Countries Are Trying, but Urgently Need Improvement

The global assessment, two years in the making, is the first official gauge of progress under the 2015 Paris Agreement.

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While many of the worst outcomes feared in the 2010s appear less likely today, the report said, current efforts are still not enough to avoid calamity. Sascha Steinbach/EPA, via Shutterstock

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Mitigating climate change is humanity's most significant innovation challenge.

The climate tech sector—including entrepreneurs, universities, investors, policymakers—will be critical in this effort.

Yet it's not clear whether the climate tech sector is currently able to deliver upon ambitious climate goals.

Through a literature review, data analysis and a series of expert interviews, we set out to better understand **the innovation and investment gap in climate tech**.

Key findings

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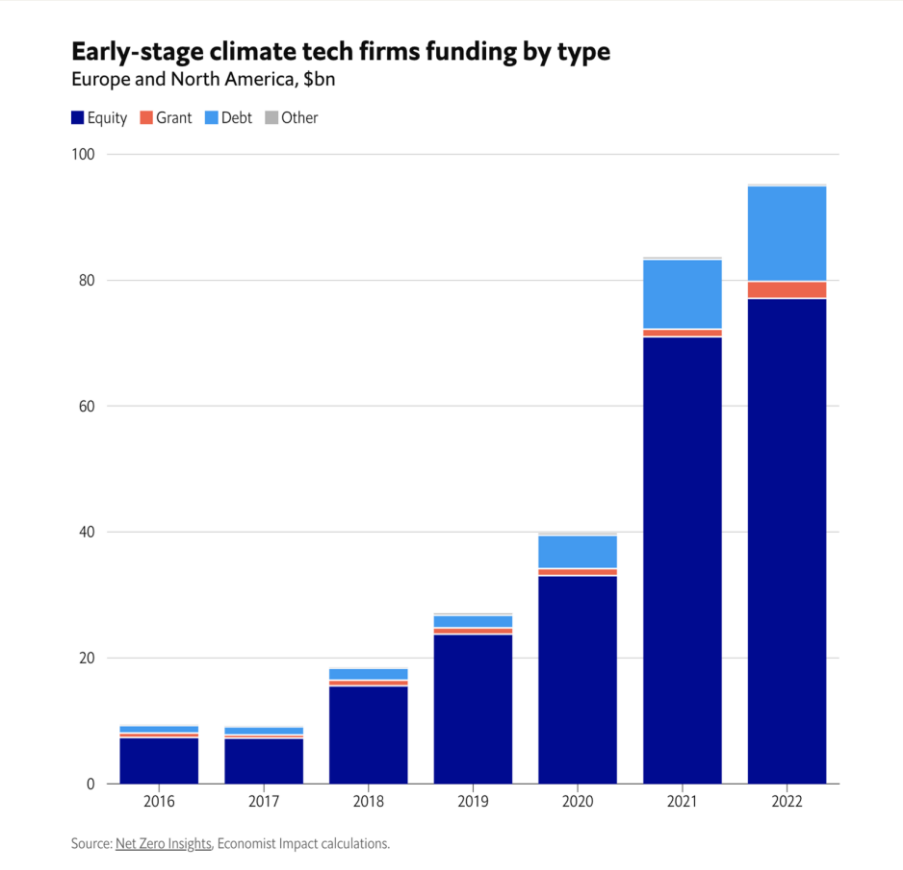
1. There is an urgent need to support early-stage climate tech innovation



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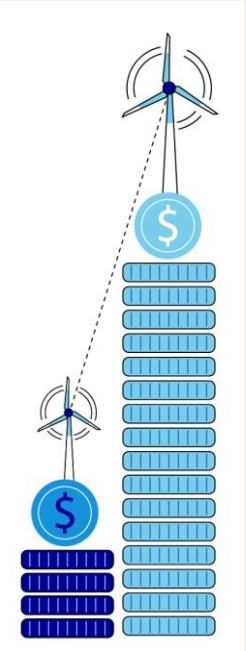

46%

of the emission reductions needed to reach net-zero by 2050 will come from adopting technologies still under development.

6%

Just 6% of private investment in the sector went to emerging or early-adoption technologies in 2021.

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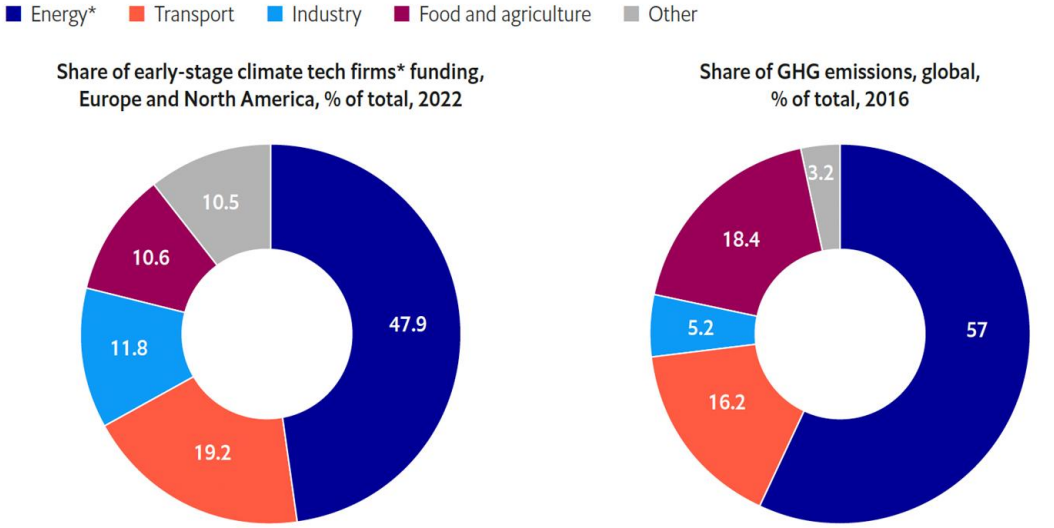
2. Funding for early-stage climate tech firms is not consistent with sectoral contributions to global emissions.

Funding for early-stage climate tech firms in Europe and North America, broken down by the economic sector targeted, versus the relative proportion of global greenhouse gas emissions produced by each sector annually.



*As defined by Net Zero Insights, early-stage climate tech firms refer to startups and SMEs from the pre-seed to exit stage developing innovative products, services, or technologies addressing at least one of the six objectives of the EU Taxonomy for sustainable activities.

Source: Climate Watch and the World Resources Institute (2016), Net Zero Insights (2022), Economist Impact calculations

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3. There is a misalignment between public funding and the requirements of the climate tech sector.

Public funding plays a critical role in spurring the development of immature technologies, particularly by supporting early-stage innovations that the private sector may deem too risky.

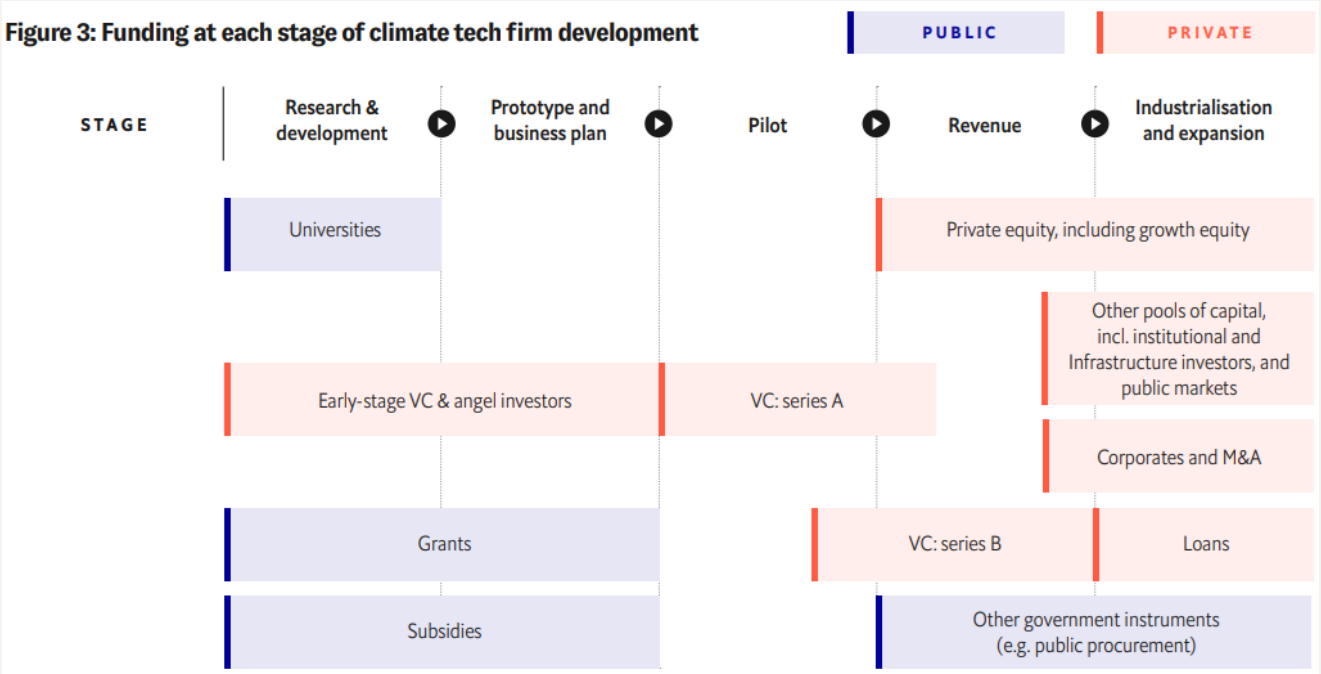
However, the manner in which public funding is provided is too often poorly aligned with the requirements of the climate tech sector.

- Public grants often **lack flexibility**, making it difficult for climate tech firms to innovate as they grow.
- **A reluctance to support technologies with higher-risk profiles** stymies the development of the transformative innovations necessary for net-zero.

“Governments need to step up.”

Dr Carlos Härtel,
Chief technology officer, Climeworks

4. Greater diversity of funding sources will spread risk and accelerate climate tech investment.



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Implications

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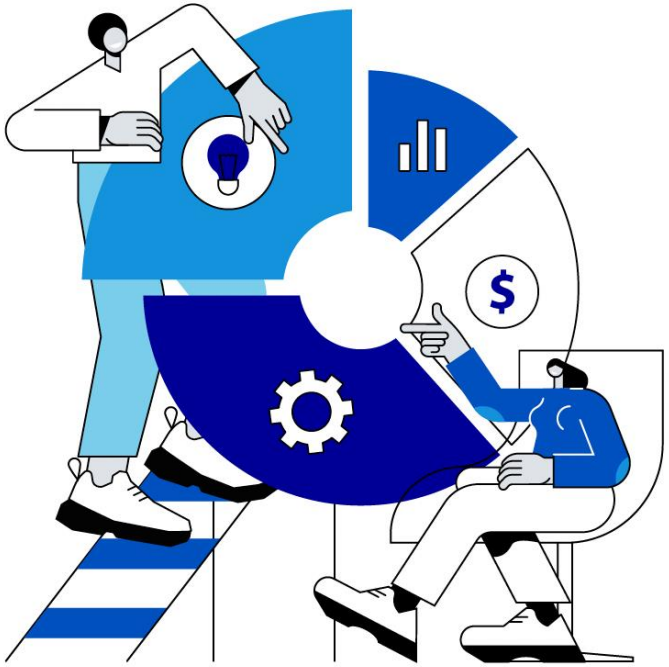
Investors should tailor their climate tech investment strategies to maximise their impact on realising net zero. This includes diversifying and balancing their portfolios of climate tech investments to account for the complementary roles that different climate technologies will play in a net zero future, as well as variation in the risk profiles of investments and their timescales to maturity.

Governments should consider increasing public support for early-stage innovation in higher risk-reward areas. In particular, adopting a mission-oriented approach to public investment may help governments to assume a more assertive role in catalysing the innovation necessary to counter the climate crisis.

Universities and policymakers should do more to ensure that early-stage R&D is translated into scalable technologies with real world impact.

"Not enough is being done to identify and invest in the high-risk, high-impact areas that will be necessary for net-zero."

Jules Besnainou, executive director, Cleantech for Europe



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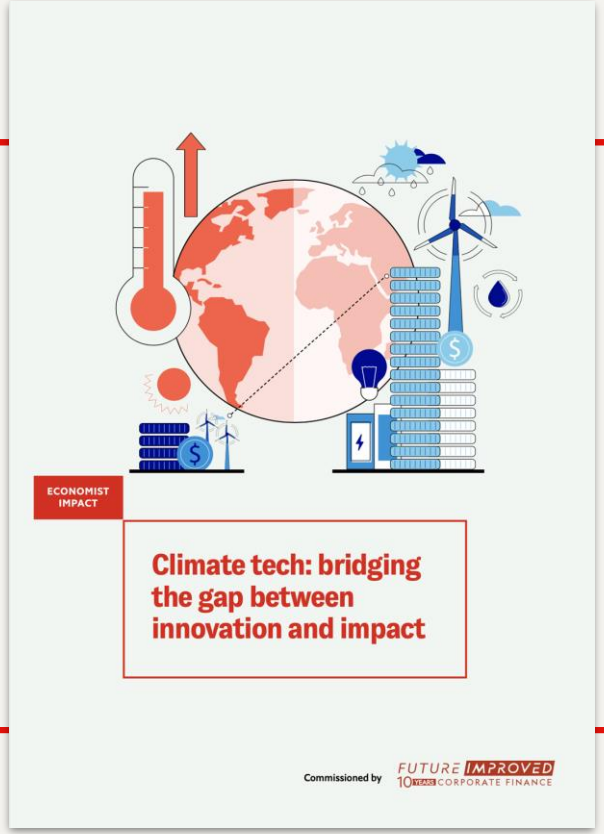
Thank you



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