THIRD DERIVATIVE

Scaling Building Climate Technology: Cities, Partnerships & Funding

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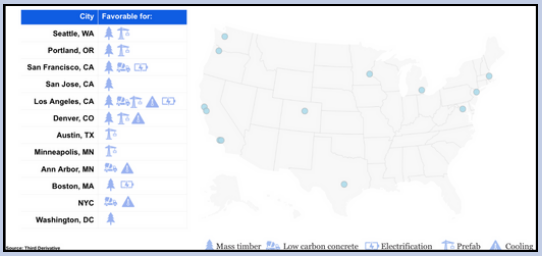
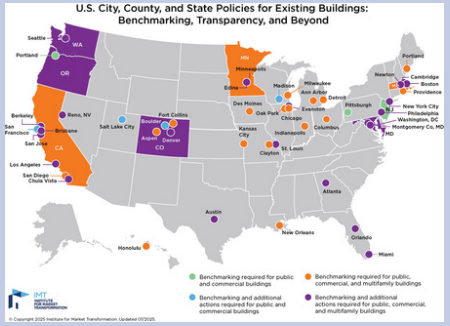
Purpose:

The purpose of the Third Derivative (D3) capstone project was to identify practical pathways for climate tech startups to de-risk their decarbonization technologies, accelerate scale, and achieve market adoption in the building sector. Buildings account for nearly 40% of global emissions, and although viable solutions exist, the rate of decaarbonization remains slow. Our research examined critical levers within the private sector while highlighting the pivotal role cities and the broader public sector can plan in creating early markets, reducing perceived risks, and enabling deployments. By filling in key knowledge and research gaps across these domains, our work directly supports D3's internal Building Sector Investment Thesis and provides a startup roadmap designed to guide its portfolio companies towards fast and more durable commecial traction.





Methods:

Our approach combined an exstenive review of existing literature with orginal research into key private-sector firms, influential decarbonization policies across major US cities, and emerging public-private partnerhip models. We also examined the operational, financial, and regulartory challenes that climate-tech starts routinely face when entering the building sector. A central component of our methodology was conducting more than 40 interviews with industry leadrss, including developers, architects engineers, sustainability directors, policymakers, and innovators. Interview data ere analyzed to identify tehmes, patterns, and actionable insights that startups can leverage to improve their market entry strategies, reduce perceived risk and increase thei likelihood of achieving scale.

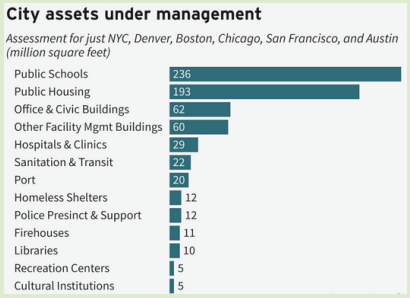
Outcomes:

This project generated a mix of original findings and curated market intelligence designed to deliver actionable value to D3 and its startup portfolio. Key outcomes included:

- **A database of progressive US firms:** developers, architects, engineers, contractors, asset managers with demonstrated appetite to pilot, validate, and de-risk emerging cleantech solutions.
- **A database of leading US cities** that have adopted ambitious, innovative, or startup-friendly building decarbonization policies, identifying where supportive market conditions and early-mover opportunities exist.
- **A summary of primary challenges facing building sector startups**, paired with clear strategies and leverage points to overcome technical, financial, cultural, and procurement barriers.
- **An analysis of the value cities provide startups**, including their ability to reduce risk through policy alignment, created early demonstration markets, convene partners, unlock public-private funding, and accelerate pathways to commercial traction

Cities Opportunities

Assets



Policy

NEW YORK STATE OF OPPORTUNITY. Empire Building Challenge

MASSACHUSETTS CLEAN ENERGY CENTER

DENVER CLIMATE ACTION, SUSTAINABILITY & RESILIENCY

Funding

DENVER THE MILE HIGH CITY

NEW YORK STATE

Partnerships

TRANE TECHNOLOGIES

Trane Technologies partnered with the Chicago School District to installing geo-looped heating and cooling system

Cities Ranking

City	# Incentives	# Funding	# Public Statements	# Regulations	# Political Will	# Total Score
New York	5	5	4	5	5	24
San Francisco	5	4	5	5	5	24
Boston	5	4	4	5	4	22
Seattle	4	5	4	4	5	22
Santa Monica	4	4	4	5	5	22
Chicago	4	4	4	4	4	20
Washington D.C.	4	4	4	4	4	20
Portland	4	4	3	4	4	19
Los Angeles	4	4	4	3	4	19
Denver	4	3	3	3	4	17

1 – Limited policy action or incentives.
2 – Isolated pilot programs or low funding.
3 – Policy or funding exists but lacks scale or enforcement.
4 – Consistent implementation with noticeable impact.
5 – Aggressive targets, strong enforcement, and high innovation.

Results:

This work consolidates highly fragmented insights into a unified foundational resource that did not exist within D3. We shared out findings with D3's 250+ portfolio companies, and the insights will directly inform the organization's Building Sector Investment Thesis to guide future cohort design and company selection. The work equips D3 with clearer market signals, high-value private and public sector partnership opportunities, and a refined understanding of where policy alignment reduces adoption friction and increases the probability of scale. By strengthening D3's ability to steer startups toward supportive markets and pilot opportunities, these results enhance programmatic focus and accelerate progress in a sector responsible for nearly 40% of global emissions.

Acknowledgements

This project was made possible by both of our official partners mentioned above, as well as the 40+ industry leaders we had the privilege of interviewing. We are incredibly grateful for their time and insights.