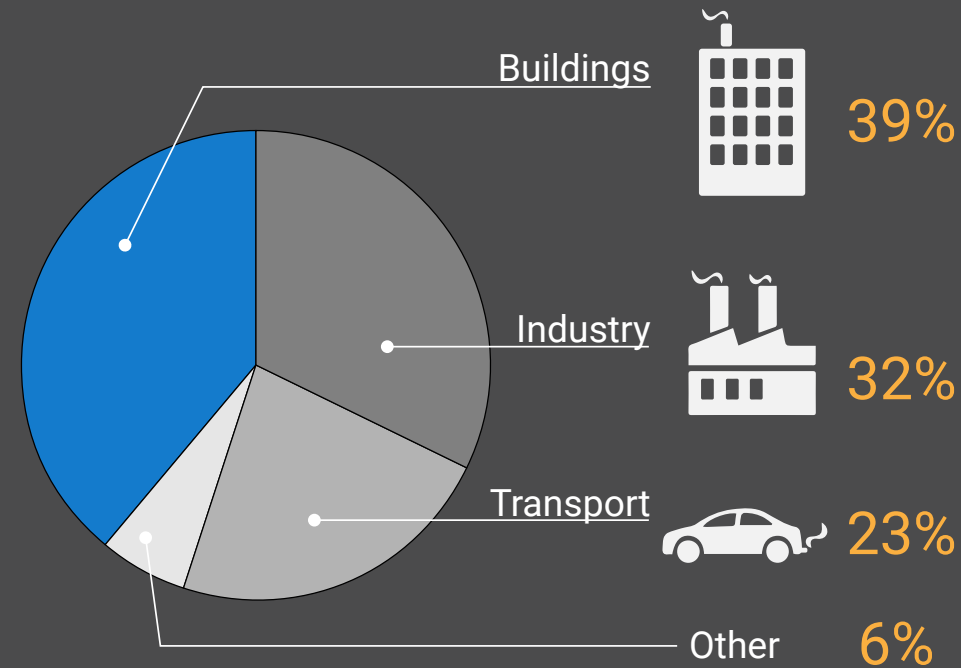


The Challenge

In the USA and globally, buildings account for approximately 39% total CO₂ emissions. A majority of buildings in the USA were built before energy codes even existed, and they will still be here in the year 2050.

To approach net zero global CO₂ emissions by 2050, we must retrofit the existing building stock in a way that drastically reduces energy consumption while also converting fossil fuel based heating systems to electric heat pumps running on renewably generated electricity.

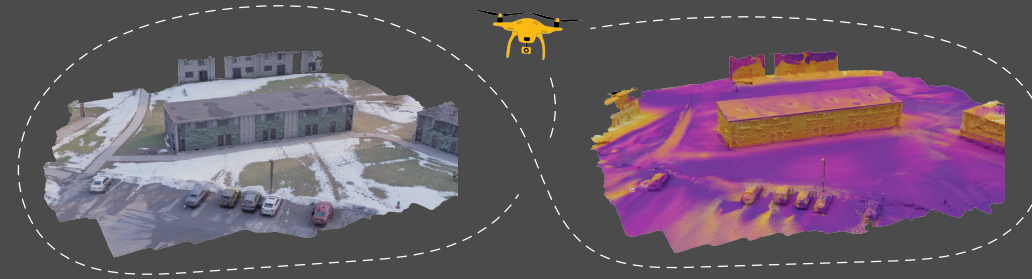
Implementing such deep energy retrofits on America's enormous building stock is a major challenge, both because of the associated costs as well as the invasive nature of such work, which in most cases must be performed with existing tenants in place.



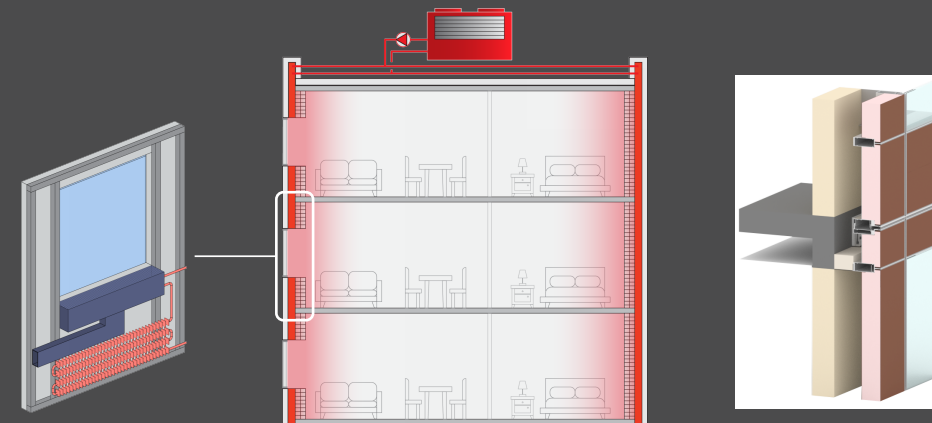
Sector Contributions to Global CO₂ Emissions

The Solution

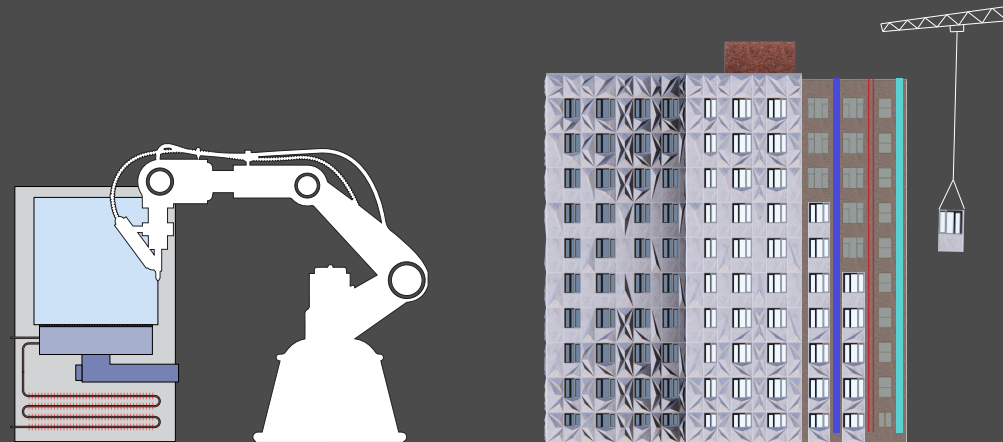
The ENCASE team is addressing this challenge by combining high-performance facade and HVAC upgrades with advanced robotics and manufacturing technologies to deliver a comprehensive and scalable solution for low-cost and minimally invasive retrofits.



Robotic Mapping, Sensing, and Inspection



Overclad Facade Panel with Integrated HVAC







Advanced Manufacturing

Modular Installation



Our Team

	COMPANY	EXPERTISE
	Hydronic Shell Technologies	Mechanical Engineering & Design Technology
	Walter P. Moore	Structural & Facade Engineering
	Consortium for Research & Robotics	Advanced Manufacturing
	Lamarr.ai	Robotic Mapping, Sensing, & Inspection
Connector: International Business & Technology Service Corporation		

The ENCASE Team has the expertise and experience necessary to develop and implement our comprehensive retrofit solution. As demonstrated by our letters of support from a wide array of industry leaders, we also have the networks and credibility necessary to partner with additional stakeholders to demonstrate our technology during Phase 2 of the E-ROBOT competition.

American-Made Challenges
E-ROBOT Prize
Phase 1 Submission

