



RetrofitNY Program Overview

NASEO Annual Meeting

October 14, 2021



New Industrialized Carbon Neutral Retrofit Solutions Are Needed

- 75%+ of existing buildings will still be here in 2050
- Low vacancy rates
- No easily implementable solutions currently exist



Need for carbon neutral solutions with residents in place at an acceptable cost

RetrofitNY is inspired by the successful Energiesprong model



Netherlands



United Kingdom



Germany



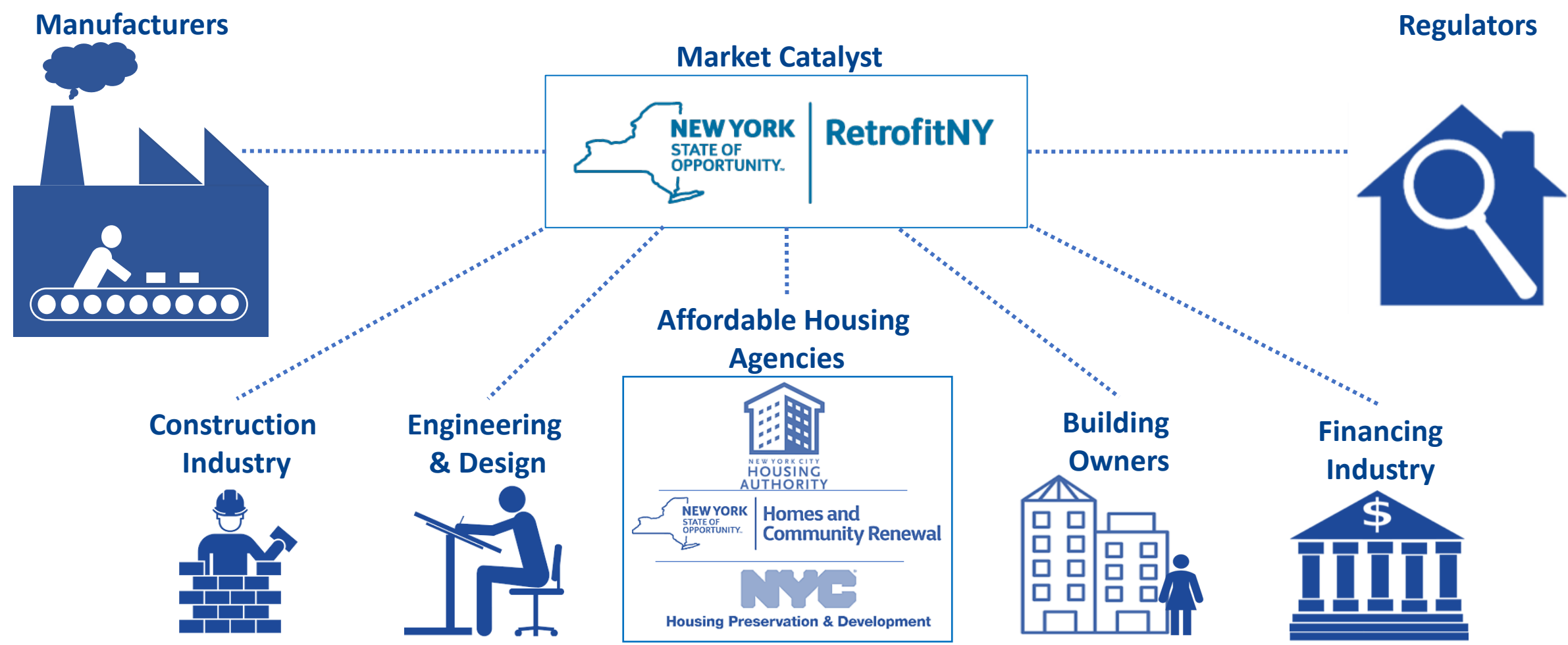
France



New York



RetrofitNY: Supporting the Creation of Scalable Retrofit Solutions in NY





- Electrified carbon neutral solution
- 50-80% energy use reduction
- Standardization and mass customization



Cost Compression is Key

Achievements of the Energiesprong program

- **Net Zero buildings at 45% cost of initial pilots**
 - **2010 \$145K per unit**
 - **2013 \$65K per unit**
 - **Current target at \$40K per unit**



A 10-Year, Multiphase Initiative

Preparation

Pilot
Projects

First
Market

Market
Growth

Volume
Market
for Carbon
Neutral
Retrofits

- Q1 2018: Design RFP round-1 release
- Q1 2019: Design phase end round-1 pilots
- Q4 2019: 1st innovation solicitation release
- Q4 2020: 2nd innovation solicitation release
- Q1 2020: NYCHA deep energy retrofit RFP release
- Q2 2020: Demand aggregation platform launch
- Q2 2021: RFQs release for market development
- Q4 2021: anticipated round-2 solicitation launch

NYC Design Pilots

Project: 300 E 162nd, Bronx
Owner: Volmar
(42 units)



Project: Casa Pasiva
Owner: RiseBoro
(46 units)



Project: 439 W 125
Owner: Joe NYC
(21 units)



Upstate New York Design Pilots

Location: Troy, NY

Project: Two-stories (18 Units)

Owner: Beacon Communities

Team: ICAST

Location: Phoenix, NY

Project: Two-stories (40 units)

Owner: Rock Property

Team: King + King Architects

Location: Portville, NY

Project: Two-stories (24 units)

Owner: Conifer Reality

Team: SWBR



Key Learnings from the First Phase

Successes

- 6 viable solutions
- Several projects anticipated to be built
- Very engaged market actors: owners, architects, engineers, contractors
- Supply chain starting to innovate

Challenges

- Cost
- Electrification of hot water in larger buildings
- Supply chain
- Market segmentation

Envelope solutions development

Integrated low-cost envelope solution for retrofit application



- High performance insulation and weather screen
- Air-sealing
- Light weight
- Integrated doors & windows

Integrated HVAC (Energy Pod)

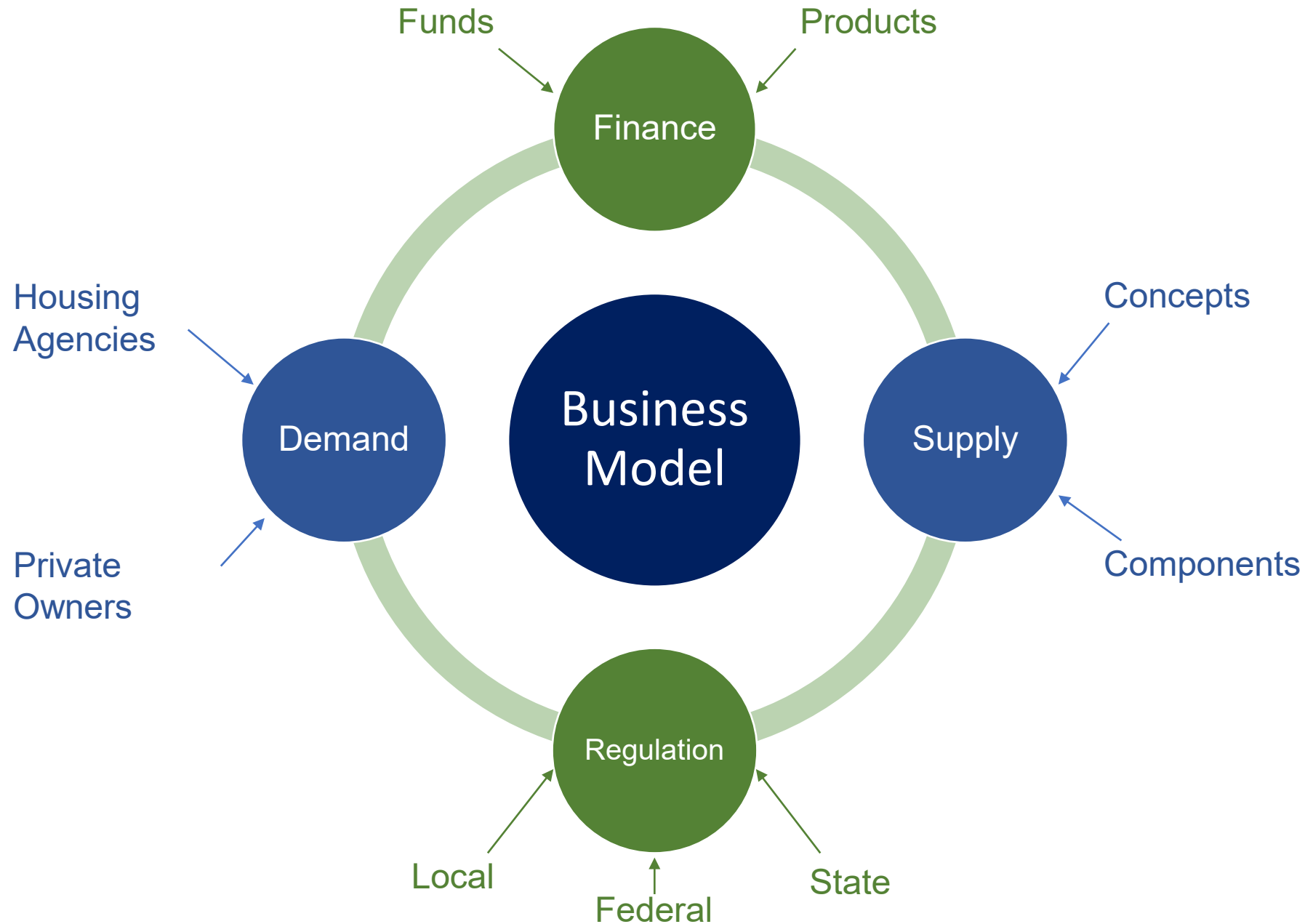
Integrated HVAC solutions that compress costs



- Heating
- Cooling
- Dehumidification
- Energy recovery ventilation
- Domestic Hot water

Photo: courtesy of Factory Zero

Developing new business models in the multifamily sector to tackle climate challenges of today.



Solution Providers

Integrated multi-functional teams to implement innovative business models

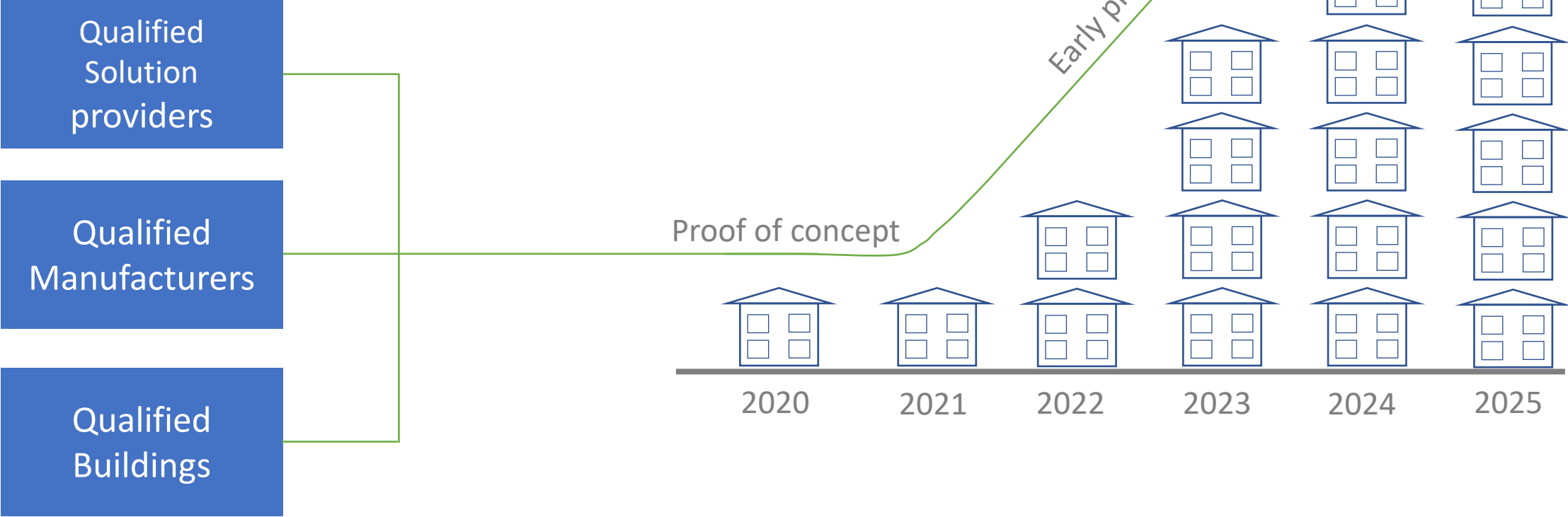


Photo: courtesy of Rocky Mountain Institute

- Provide turn-key service to building owners
- Cross functional skills
- Specialized knowledge of integrated technologies
- Efficient operations
- Leveraging digital tech and processes

Industry support

Supporting teams and building production ramps



RetrofitNY Pledge

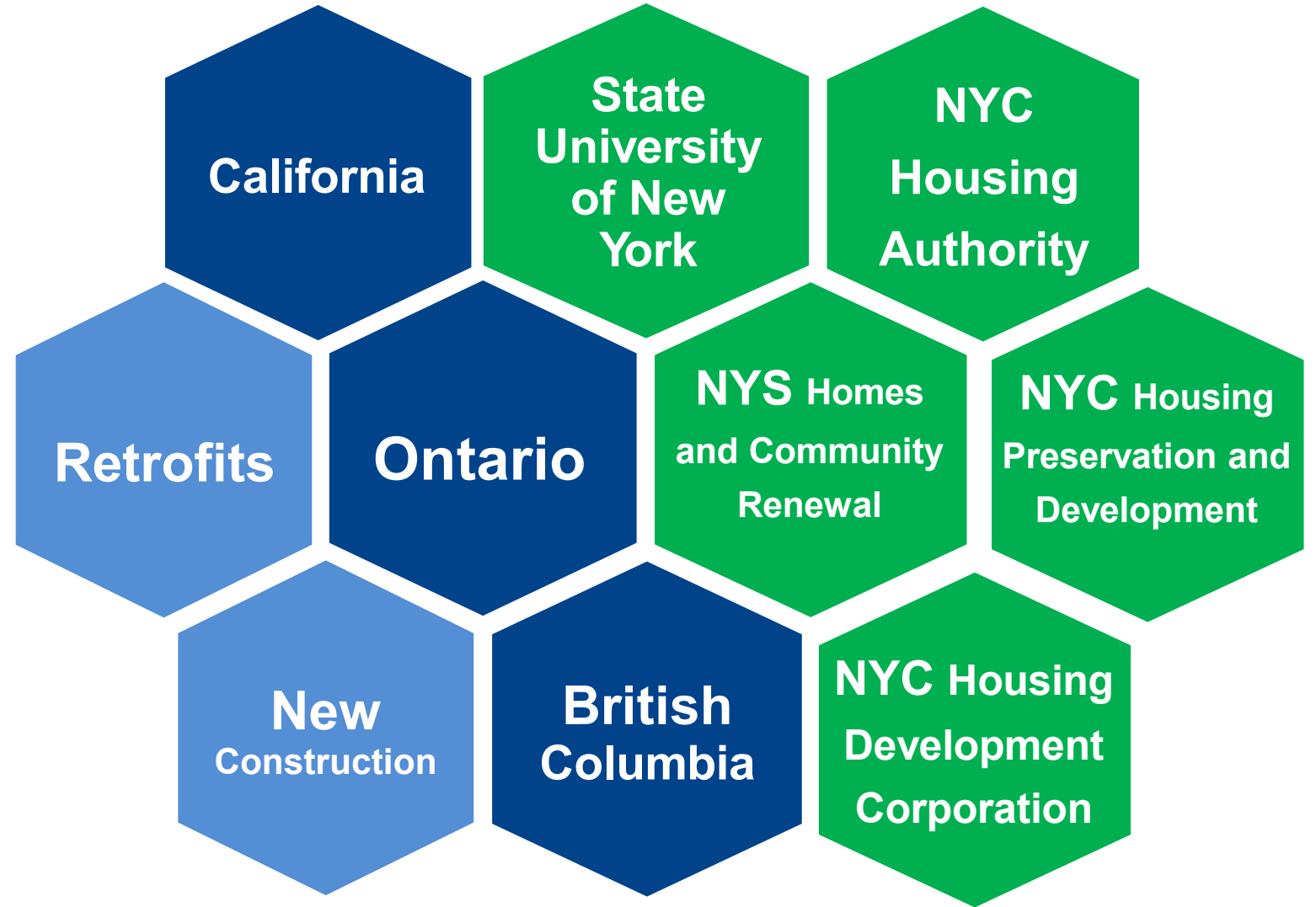
Giving owners a voice to demand new innovative solutions

- Increased ability to address current and future costs and risks of building ownership
- Demonstrated commitment to driving positive change
- Be seen as a leader among building owners

<https://www.nyserda.ny.gov/All-Programs/Programs/RetrofitNY/RetrofitNY-Pledge>



A Large Scale
North American
Market is
Emerging



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