

May 20th 2025
Syracuse, NY

raising the future



Offsite, Sustainable,
Climate-Resilient
Building Strategies

Session 4: Planning an Offsite Strategy

*What Now? Guided Workshop to
Jumpstart Your Research and Planning*

PRESENTED BY



Habitat
for Humanity®
of New York State



3:00 – 4:30

Meet the Presenters

Jeff Knox

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Homes**

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Session Format: Guided Workshop

What role or lens is most important to you?

Executive Leadership

Whole-organization & multi-year approaches

Funding

Grant management, fundraising & development, mortgage management

Construction

Architecture & design, construction, real estate development

Mission

Volunteer management, partner family support, community engagement

From experience: GOALS

**What goals have other affiliates set,
and did using modular products
help achieve them?**

Sample goal: Increase / expand RURAL service

Habitat South-Central New Jersey focuses most of its new home production within the dense urban centers of their five-county service area, but they commit to **serving outlying rural communities exclusively using modular home products**.

This allows them to invest in and support these communities without over-stretching supply lines, including access to limited labor pools.

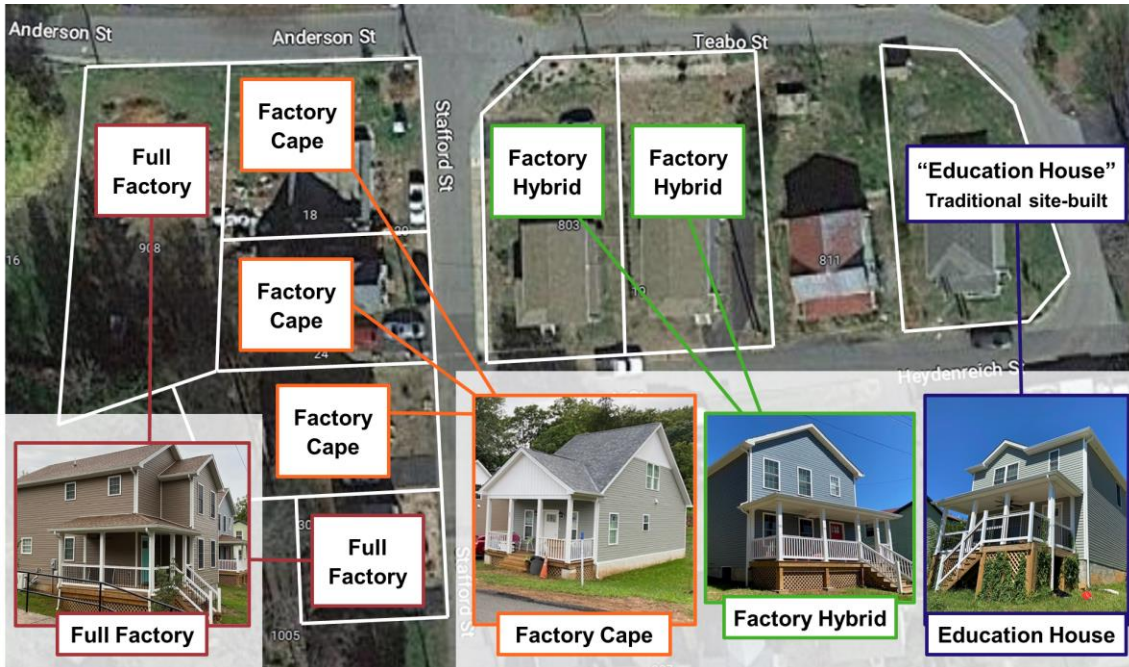


Habitat Southeast Ohio serves eight counties and only one has a city center, where the affiliate office is located. By partnering with local technical schools that produce modular homes, the affiliate has committed to building **one new home in each county every two years**. These communities are remote, their financial resources are extremely limited and the distance between sites would make traditional onsite construction financially infeasible.



Sample goal: DOUBLE annual new home production

Habitat Staunton-Augusta-Waynesboro (VA) set a goal of doubling annual production using various modular models. **They went from building 1 home in 2018 to building 6 homes in 2021.** Building on that production increase they built 10 homes in 2023 including their first multi-family development on land provided by their city because they were seen to be “moving the needle” on the local housing deficit!



Habitat Vail Valley (CO) set a goal of tripling annual production by partnering with a local modular factory to expand capacity and reign in costs in an area where the average modestly-sized home sales price is more than \$1 million. **They went from building 8 homes in 2023 to being on-track to complete 24 homes in 2025,** including 8 traditional site-built homes in one neighborhood and 16 modular homes in another neighborhood.



Sample goals:

Launch a CAPITAL CAMPAIGN

La Crosse Area Habitat (WI) launched a capital campaign in 2020 built on the promise of doubling their production using panelization and modular products. They **raised \$1.5 million** and tripled their annual production in 3 years.

Model: The Cleveland | 1,312 sq ft



Modular unit costs	
“Base” model cost	\$93,620
Energy efficiency upgrades To 2020 IECC	\$2,440
Electrical upgrades To 2020 NEC	\$975
Roof pitch upgrade From 3:12 to 5:12	\$2,256
Surcharges and fees Inc. \$4,000 refundable carrier deposit	\$10,645
Total unit cost: \$109,936	

Sample goal: REHAB a trailer park

Greeley-Weld (CO) has committed to revitalizing the largest source of affordable housing in their rural county—an 800-unit fee-simple trailer park—by **replacing the most dilapidated units with new manufactured housing**. They are partnering with individual families to provide transitional housing, scrape the old units, and finance and install new ones.



Left: Current state of community housing stock. **Below:** Planned replacement model.

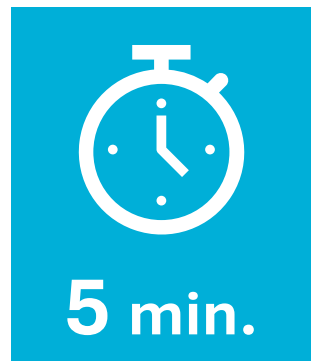


Discussion session 1: GOALS

What GOALS do you hope to accomplish using these products? Dream big!

Are there specific challenges you are looking to OVERCOME using offsite?

Share back: Each group will share out your **TWO** boldest goals.



From experience: CHALLENGES

What were the largest **barriers** to your use of modular—and how did you **overcome** them?

Increasing access to offsite production: CHALLENGES

In conversation with our network of local Habitat organizations and industry experts, we've identified these key challenges so far:

POLICY

ZONING

- Local P&Z exclusion policies for manufactured housing
- Often erroneously applied to modular homes

FINANCING

- Different products, risks, and applications... *opportunity for more research*

ORGANIZATIONAL

- Habitat's own QA standards

PERCEPTION

BUILDERS (affiliates)

- Not aware of benefits
- Customization options unclear

BUYERS

- Unclear how products compare

LENDERS

- Risk aversion based on past implementation... *opportunity for more research*

JHAs

- Historic prejudice against factory products, unclear inspection processes

LOGISTIC

PERMITTING

- Lack of clear processes can add complication / time

TRANSPORTATION

- Cranes, roll-ons, interstate fees, overhead lines, narrow roads...

COSTS

- Lack of project-based cost comparisons

LABOR

- Specialized labor, small labor pools

CODE PLUS

- Aligning onsite work, inspections and certification to factory work

Discussion session 2: CHALLENGES

What specific local challenges or barriers will need to be overcome to use offsite?

What policy barriers should you look into?

What perception barriers can you begin working on?

What *new* challenges can offsite create?

Share back: Each group will share out your **TWO** biggest concerns.



From experience: SOLUTIONS & STRATEGY

What can an **affiliate** offsite implementation strategy look like?

What could a **statewide** offsite strategy look like?



JOSHUA RANCH PLAN



JOSHUA CAPE PLAN



FLOOR PLAN
First Floor Only: 1245 sq. ft., 3 Bed, 2 Bath
Overall Dimensions 27'8" x 48'

Plan Shown With Options



JOSHUA DUPLEX PLAN



FLOORPLAN

Each Unit 1: 1,245 sq. ft., 3 Bed, 2 Bath
 Overall Dimensions: 79' x 42'

Plan Shown With Options



BILL LAKE
MODULAR HOMES
Where Quality Meets Convenience



JOSHUA 2-FAMILY PLAN



Level One



Level Two

DUPLEX FLOORPLAN

Level 1: 1,224 sq. ft., 3 Bed, 2 Bath
 Level 2: 1,224 sq. ft., 3 Bed, 2 Bath
 Overall Dimensions: 27'8" x 48'0"



BILL LAKE
MODULAR HOMES
Where Quality Meets Convenience

Discussion session 3: SOLUTIONS

What specific local assets are available?

What specific local assets do you need to find? Where can you start looking?

What implementation models could fit your affiliate?

Who can you share capacity with?

Share back: Each group will share out the implementation model you're most interested in *and* the topic you're most interested in partnering with affiliates on.



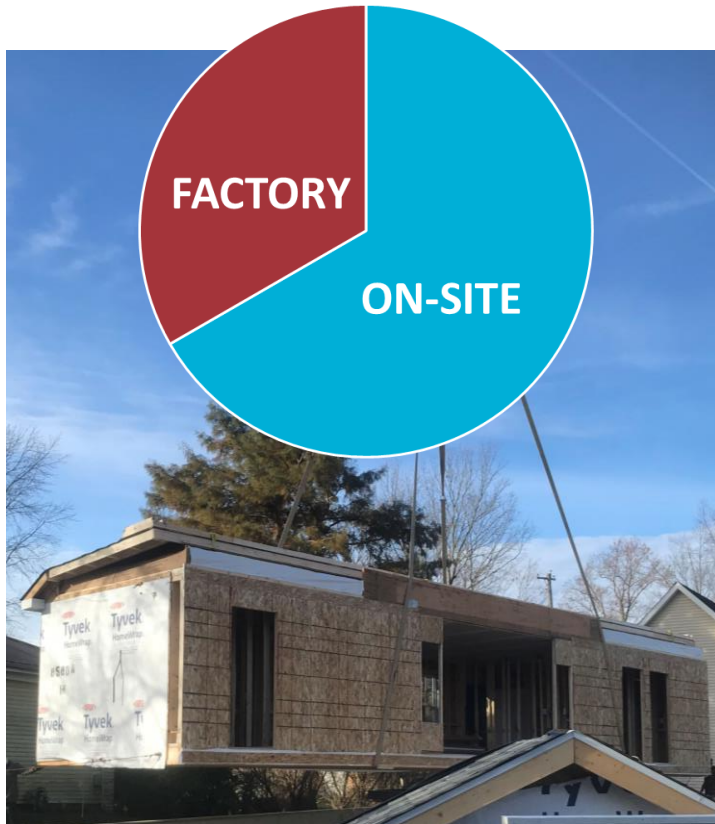
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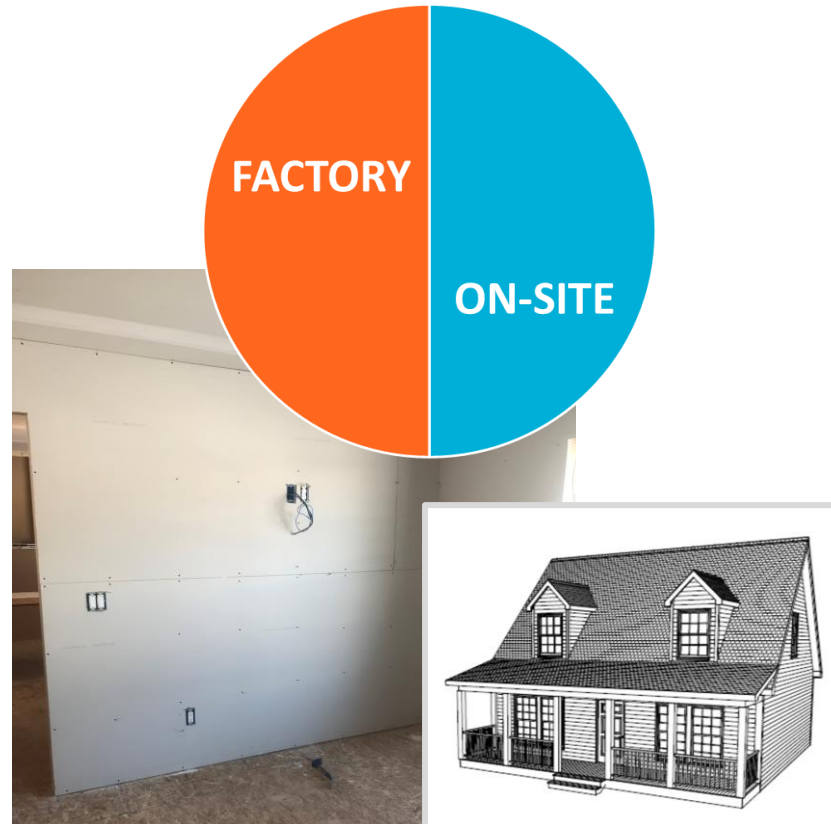
5 min.

How are affiliates “going modular” to build?

**Home
shells**



**Without finishes
/ Hybrid**



**Turnkey
finish**



Evaluating offsite options: Implementation models

How are affiliates incorporating offsite products into their production models?

Network adoption strategies

Type	Description
Situational solutions	Affiliate purchases one-off modular homes to overcome site-specific, project-specific or funding-specific production and development barriers.
Additive production	Affiliate regularly purchases modular homes as an additional housing production model to augment and increase “traditional” production rates.
Density / development	Affiliates use offsite products to “make the jump” to increased density, large-scale development, and/or development partnership models.
Turnkey service	Affiliates purchase homes and utilize “turnkey” service contractors to perform 100% of all home production and property development.
Aggregator models	One affiliate with significant experience shares services and/or support with nearby affiliates, such as by serving as a licensed dealer/broker and/or coordinating bulk purchase agreements between multiple affiliates and a producer.

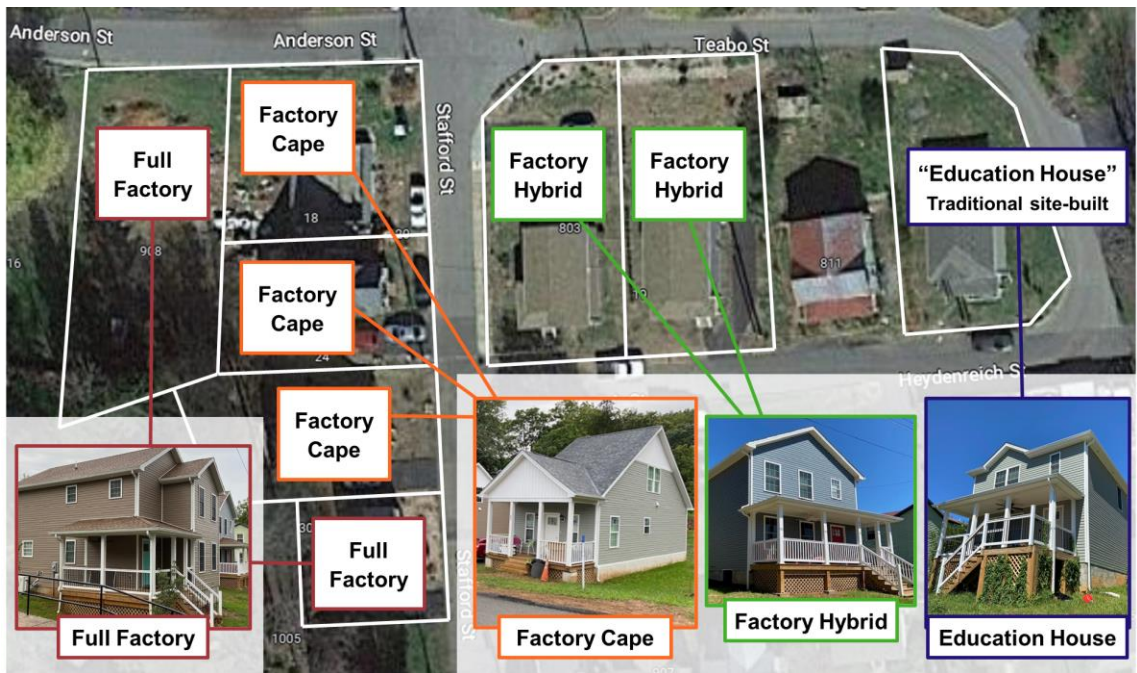


Evaluating offsite options: COST COMPARISONS

Objective cost comparisons between different products and implementation models that use **real-world projects to demonstrate actual costs** are difficult to find—and so some local Habitat organizations are conducting their own tests.

Habitat Staunton-Augusta-Waynesboro (VA) has tested **real-world development costs** across multiple modular and onsite development models to create a comparative cost-per-square-foot estimate for future development planning.

Comparison 1: Infill development testing of (3) different modular development models against traditional Habitat onsite model.



Comparison 2: Greenfield development testing of (2) different modular development models and (2) onsite development models alongside area (non-Habitat) average.

Construction cost per square foot comparison

Traditional volunteer model Contractor-managed, volunteer labor, onsite construction.	\$185 / sq. ft.	<div>LEAST cost-effective</div> <div>↑</div> <div>↓</div> <div>MOST cost-effective</div>
Area average Non-Habitat, professional onsite construction of market-rate homes.	\$175 / sq. ft.	
Hybrid modular 50-80% of home is complete upon delivery, finished with volunteers.	\$165 / sq. ft.	
Full modular 90-95% of home is complete upon delivery.	\$149 / sq. ft.	
Full contractor crews Contractor management & labor, onsite construction of Habitat homes.	\$135 / sq. ft.	

Averages include all construction costs—including property acquisition, foundation installation and all construction labor and materials—plus a portion of organizational overhead. Overhead is calculated as 50% of non-construction affiliate operational costs divided by the number of homes completed in 12 months. Historical data is adjusted for inflation.

RESULT: Optimized modular demonstrates a **20% cost savings** over traditional onsite/volunteer-centric construction.





Network adoption levels

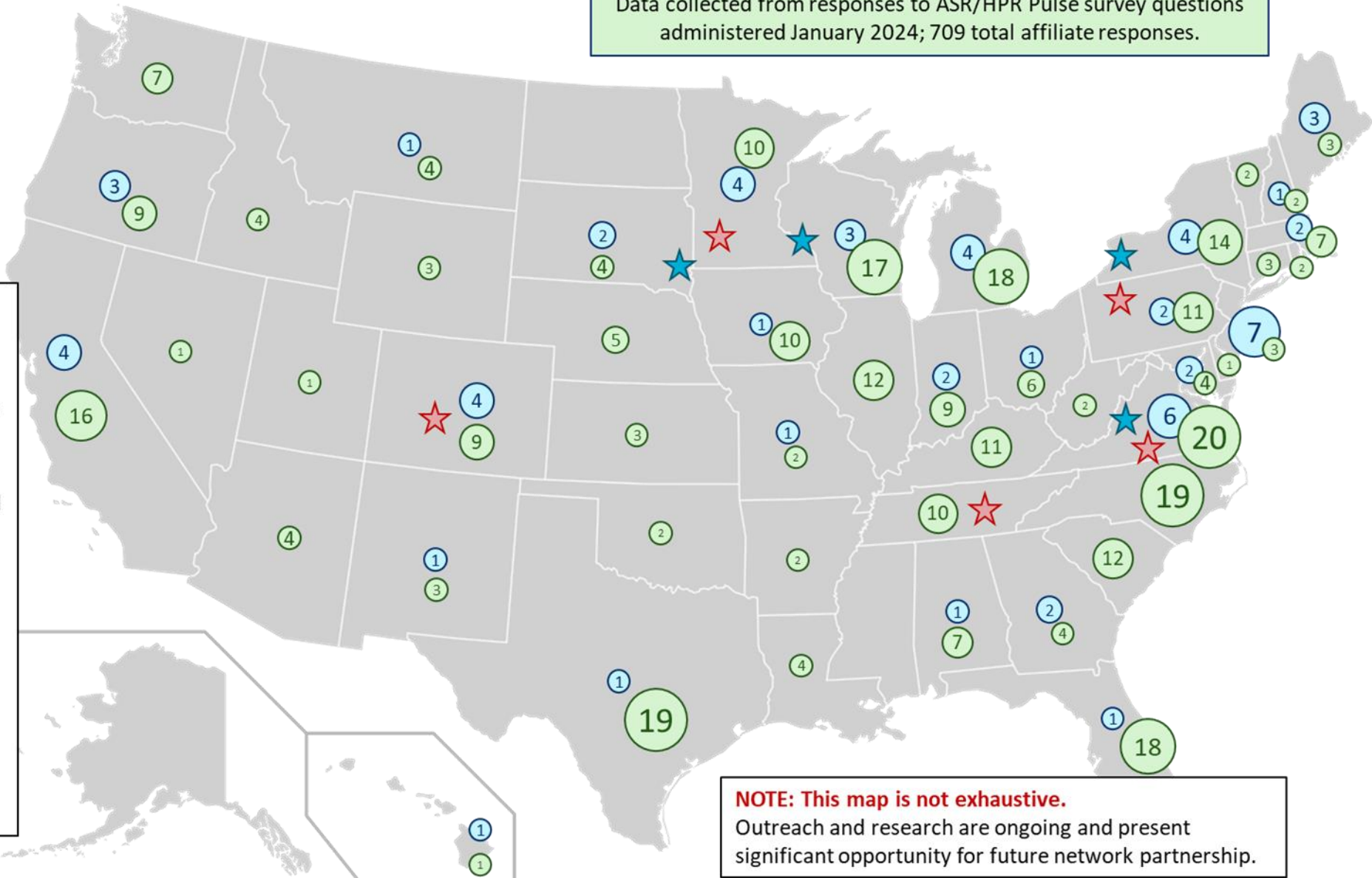
“Experience and expressed interest” are areas for network-led prospective growth.

These responses are in addition to (not overlapping) “currently implementing” affiliates.

Data collected from responses to ASR/HPR Pulse survey questions administered January 2024; 709 total affiliate responses.

Key:

-  **Number of affiliates** in state known to be **currently implementing** offsite development models (64 total).
-  **Number of affiliates** in state with **previous experience and/or stated interest** in adopting offsite models (340 total).
-  Collaborative network **aggregator models** serving multiple affiliates through offsite development services and/or support.
-  Established **factories** known to be partnering with Habitat affiliates with expressed interest to expand partnership.



NOTE: This map is not exhaustive.

Outreach and research are ongoing and present significant opportunity for future network partnership.

From experience: NEXT STEPS

How can modular **brokers and factories** be an educational partner with Habitat affiliates?

What other types of **professionals** should affiliates reach out to?

Discussion session 4: NEXT STEPS

What more do you need to know?

What specialized expertise do you need?

What types of partnerships would most benefit your ongoing learning?

Where can you find these partners?

Share back: Each group will share out their top answer for each question.



5 min.



5 min.

Closing: Prioritize your action items

For each topic area, pick:

- The one action item that is **most important** (long term), and
- The one action item that is the **easiest to accomplish** (short term).

Share back: Who would like to share their action items?



Thank you!

Contact our panelists:

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Jeff Knox
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Rick Folger

Next up:
**Happy hour
and home!**

