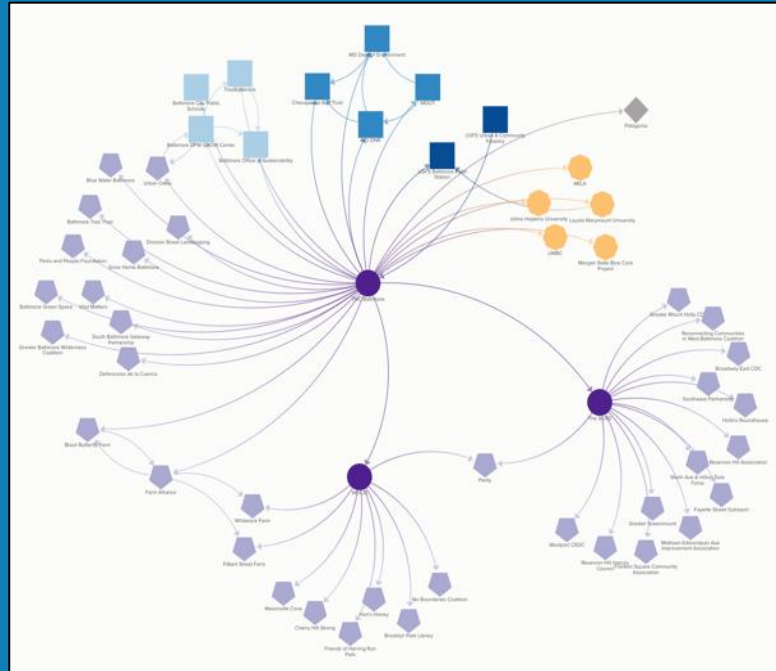


Network Science & Urban Forestry Strategy

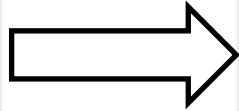
Contextualized through TNC Baltimore's Pilot Program



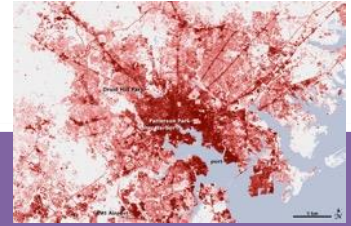
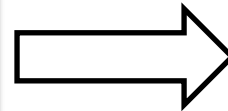
Urban Forestry Challenges in Maryland



It's hot; urban heat is harmful and costly to people, the environment, and the economy



Trees can help reduce urban heat; there is funding and legislation to plant 5M trees across MD by 2031 (10% in urban & underserved areas)

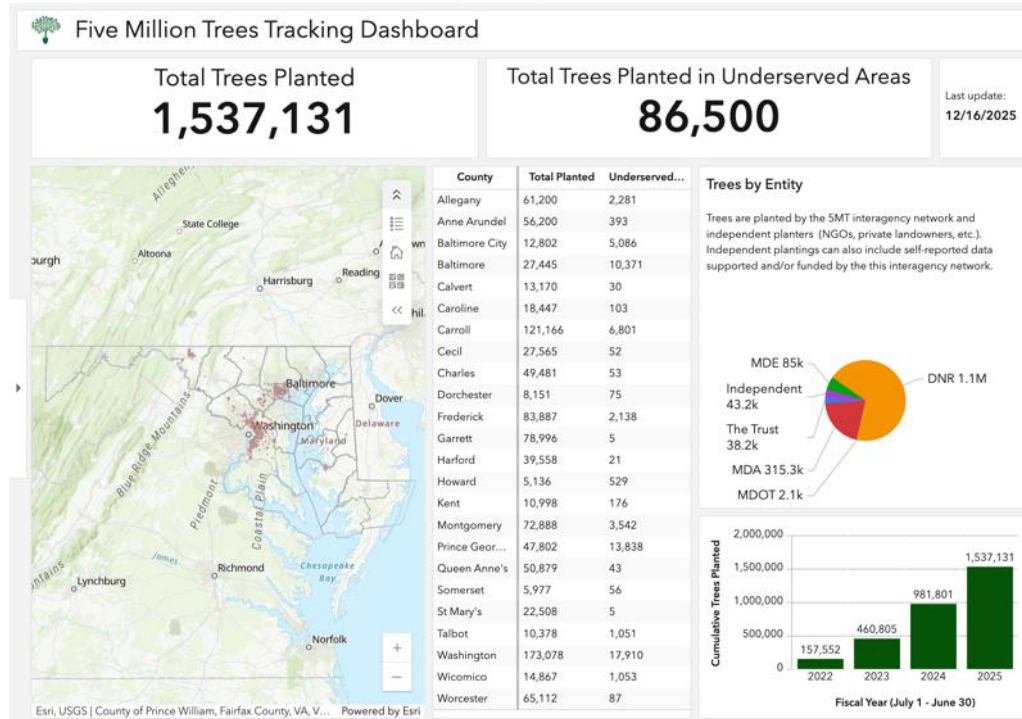


However, trees are not being planted quickly enough in urban and underserved areas to meet the state's goals and reduce impacts of urban heat

Urban Forestry Challenges in Maryland



About Register Trees Plant Trees Progress Urban Trees Media Kit Contact Us



<https://five-million-tree-tracking-tool-maryland.hub.arcgis.com/pages/progress>

What are the barriers to planting trees in urban and underserved areas?



Tree planting programs aren't **attentive** to community values or priorities

Connector programs do not bring urban and underserved communities to the table



Urban forestry **engagement** does not adequately foster trust or connection to tree planting

Tree planting programs are often perceived negatively by communities



Implementation **actions** are difficult, and grant funding is hard to access

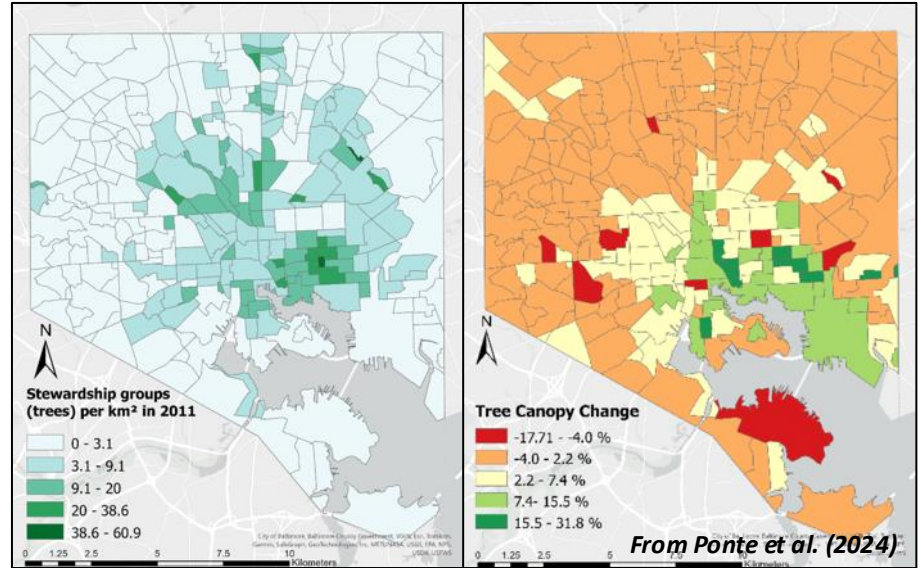
CBT is seeing repeat applications from well resourced organizations and municipalities

Community groups have been shown to help overcome barriers to participation AND improve urban forestry outcomes



Through increased trust, reliance on social ties, motivation to participate in actions related to community priorities, etc.

e.g., Austin (2002).; de Guzman et al. (2018); García (2025)



Community group leadership and the presence of stewardship groups associated with increased tree survival rates and canopy increases

e.g., Roman et al. (2015); Jack-Scott et al. (2013); Ponte et al. (2024); Romolini et al. (2013); Locke et al. (2014)

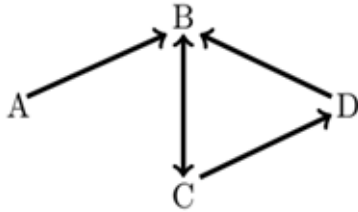
Scaling through networks

TNC Baltimore's goal: to expand tree planting in urban and underserved areas by developing resources and providing technical assistance that catalyze a network of partners to address barriers to urban forestry.

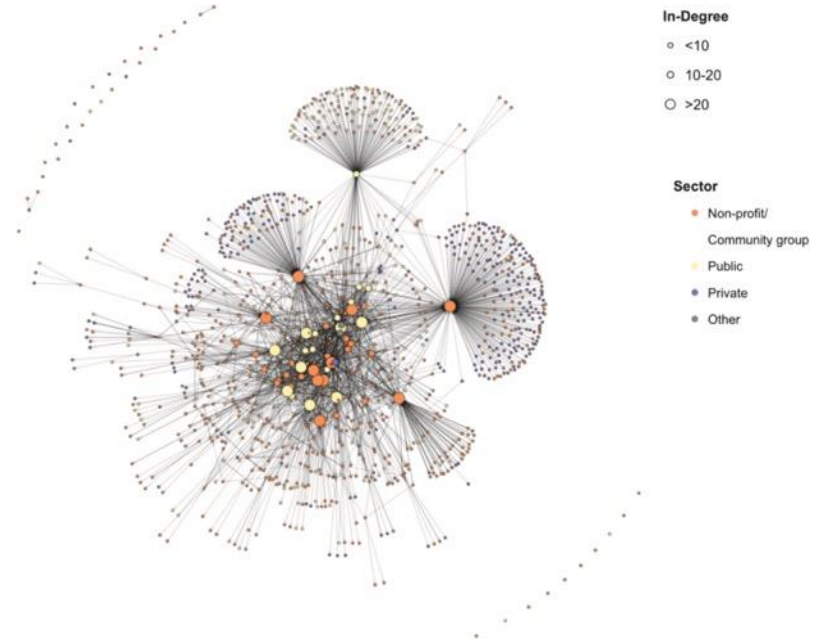


Networks and brokering organizations

Brokering organization: intermediary between unlinked, often diverse organizations within the network, to facilitate a connection between them.



- Can bridge siloes and reach peripheral organizations
- Can transmit resources and information across scales and sectors



From Livas et al. (2025)

e.g., Ernston et al. (2010); Munoz-Erickson et al. (2016); Connolly et al. (2014); Campbell et al. (2023)

Implications for Practice?

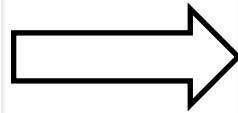
The research shows the success of networked approaches, and the importance of bridging/brokering organizations.

TNC can strategically place themselves in a role of network broker; helping to increase the two-way flow of knowledge and expertise and sitting at the boundaries of policy, research and practice.

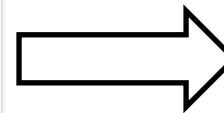
TNC Baltimore Urban Forestry Theory of Change



If TNC shares resources that capture people's attention and provide meaningful opportunities for engagement,



And supports partners with technical assistance and helping to bridge holes in the network,



Then partners will be able to increase tree planting in urban and underserved areas in Maryland.

Approach

Attention (& Listening)



Name: _____

Complete the story below from your own perspective, return back to table if you'd like to share

TRUTHS

I grew up in _____ (place)

Trees in my neighborhood are _____ (describe)

Those trees make me feel _____ (emotion)

I've seen beautiful trees _____ (where)

FRUSTRATIONS

People label my community as _____ (what)

Me and my community describe our neighborhood as _____ (what)

I feel my neighborhood is missing _____ (what)

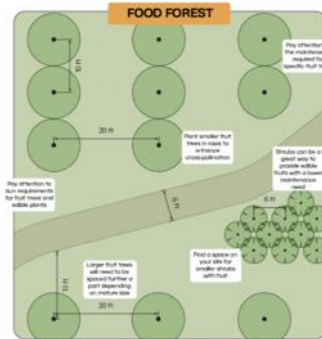
I'm tired of seeing _____ in my neighborhood (what/topic)

Flip →

Engagement
(Knowledge Co-Production)



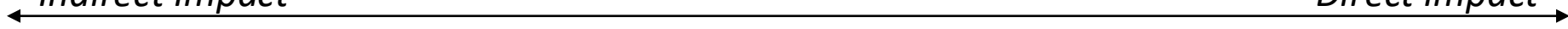
(Participatory) Action



The Nature Conservancy
Maryland DC

Indirect Impact

Direct Impact



Metrics

2024-2025 (Attention):

Urban Forestry Resources Co-Created

- To The Jungles That Be
- Urban Forestry Tree Guide
- Design Workshop Curriculum
- Community Forestry Checklist
- Urban Forestry Funding Guide

2025 and Beyond (Engagement):

Technical Assistance Provided

- 12 communities engaged
- 2 design workshops
- 8 planting plans developed
- # of grant applications supported
- # of partnership MOUs

2025 and Beyond (Action):

Action Catalyzed

- # of urban forestry programs that adopt technical assistance materials
- # of grant applications submitted
- # of grant applications approved
- # of trees planted
- # of people impacted

Scaling:

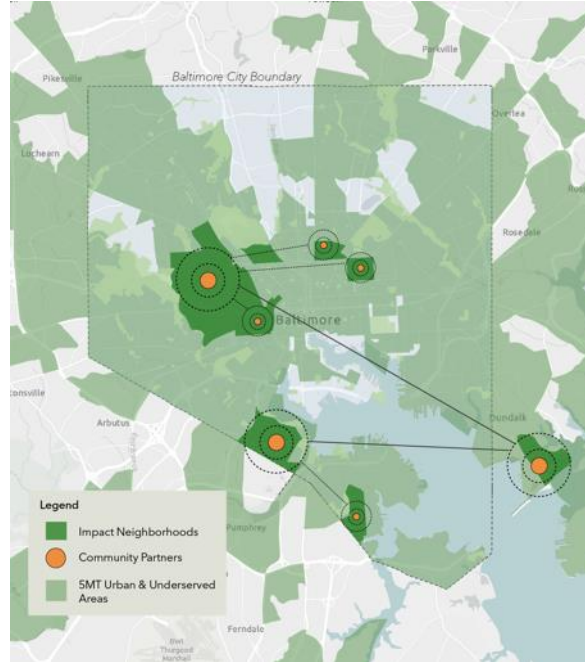
Direct Technical Assistance in Baltimore to Partner Network

2022-2024



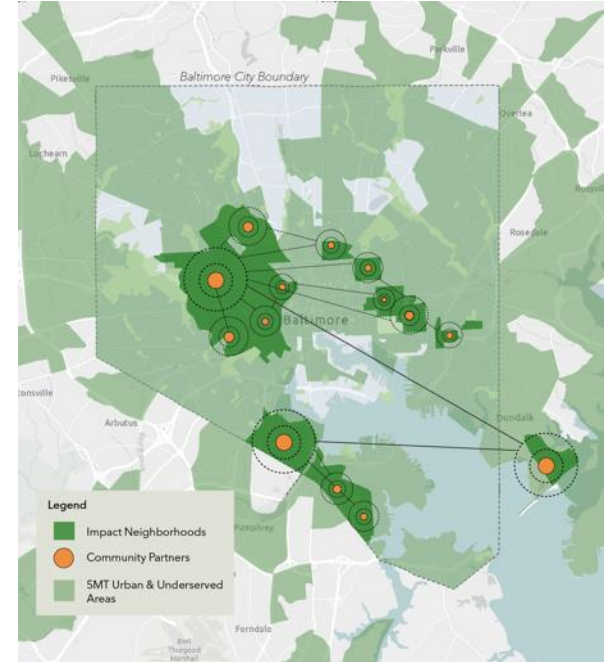
Benefit 3,000-6,000 people

2025-2027



Benefit 25,000-55,000 people

2028-2030

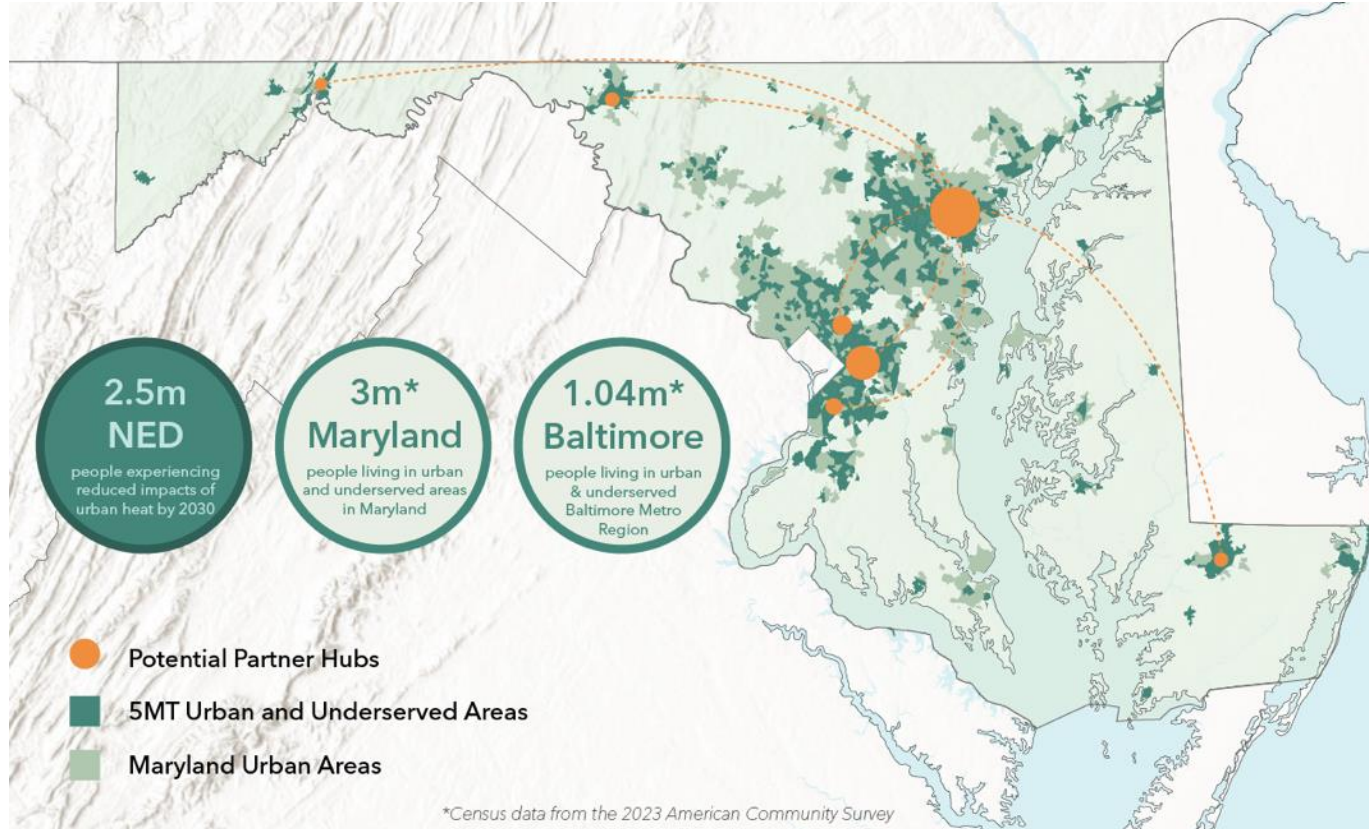


*Benefit 75,000-150,000 people**

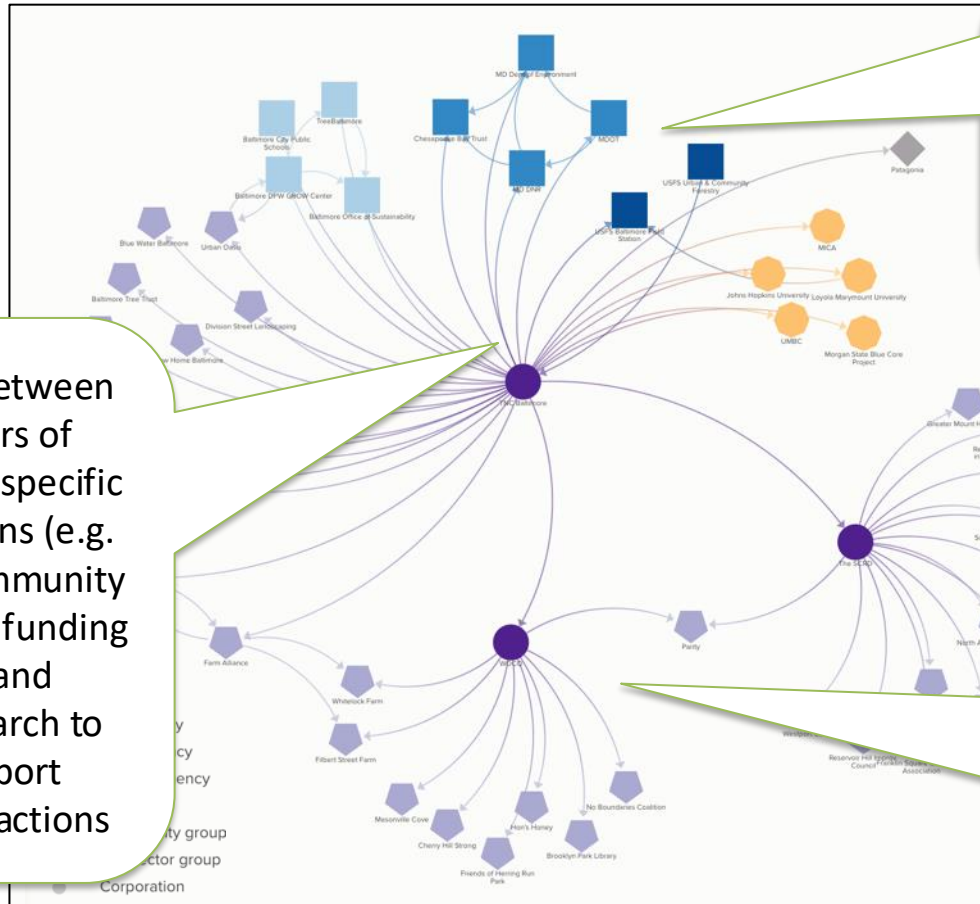
*Estimated metrics from 2023 neighborhood census data**

Scaling:

Indirect Technical Assistance in Maryland through Partner Network



TNC Baltimore as a brokering organization

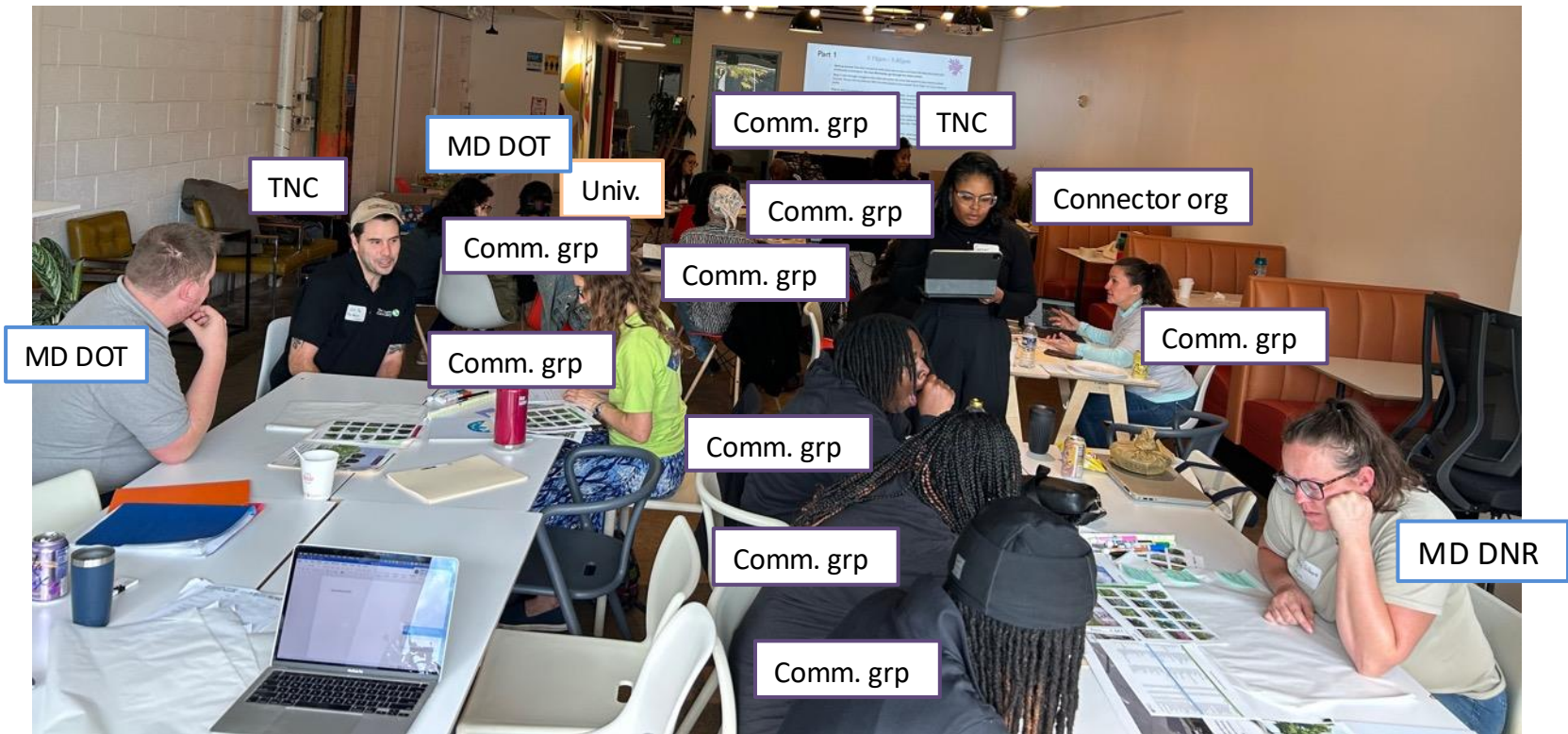


Crossing scales: levels of government; sectors; geographies

Creating bridges between groups or clusters of groups to facilitate specific types of connections (e.g. state agency to community group for access to funding opportunities and information; research to practice to support science-informed actions)

Providing technical resources to connector groups, amplifying their efforts in communities

TNC Baltimore as a brokering organization



Projected Impacts from 2025 Engagement

If all of the 2025 participants' grant applications are successful, the resulting tree plantings will benefit more than 30,000 people in Baltimore's urban and underserved communities

