Community participation in heat governance

David Hondula, Arizona State University
Ryan Winkle, RAIL CDC

With thanks and credit to Melissa Guardaro, David Crummey, and the rest of the Nature’s Cooling Systems project team
“I think the biggest hurdle is that mitigating heat is nobody's responsibility, yet it's everybody's concern”
Local governments can learn to manage heat, but need to **unlearn** decades of institutionalized practices.
Nature’s Cooling Systems Methodology Design Process

**Workshop I:**
Discover our major concerns and potential actions

**Workshop II:**
Invite designers and decision-makers to hear our concerns and determine feasible actions

**Workshop III:**
Make decisions about our priorities for implementation
## Criteria for Selection of Neighborhoods

<table>
<thead>
<tr>
<th>Heat</th>
<th>History &amp; Opportunity</th>
<th>Health &amp; Vulnerability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low vegetation coverage</td>
<td>High % vacant lots</td>
<td>High rate heat deaths / heat-related illnesses</td>
</tr>
<tr>
<td>Low vegetation index</td>
<td>Invitation from community</td>
<td>Low-income</td>
</tr>
<tr>
<td>High surface temperature</td>
<td>Slated housing, renovation, or capital improvement projects</td>
<td>High rates of self-reported heat concerns</td>
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<td></td>
<td></td>
<td>Lack of A/C</td>
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</table>

<table>
<thead>
<tr>
<th>Usage</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>High use of public spaces</td>
<td>Strong sense of community identity</td>
</tr>
<tr>
<td>High transit use</td>
<td>Potential for mutual learning (residents:stakeholders)</td>
</tr>
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<td></td>
<td>Previously surveyed</td>
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</tbody>
</table>
Nature’s Cooling Systems Community Engagement

CBO: Community-based Organization
Strategic Themes

Advocate and Educate

Mesa Care
Using social media and hashtags to highlight child safety and bus route issues

Improve Comfort/Ability to Cope

Lindo-Roesley
Planting vegetation for empty lots to reduce dust

Improve Safety

Edison-Eastlake
Create signage for heat safety and wayfinding could reduce risk

Build Capacity
## Who Should Be Involved in Advocacy and Implementation?

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Edison-Eastlake</th>
<th>Mesa Care</th>
<th>Lino-Roesley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>City of Phoenix Housing</td>
<td>City of Mesa Housing &amp; Community Development</td>
<td>Municipality - Village Planning Committee</td>
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<tr>
<td></td>
<td>City of Phoenix Streets</td>
<td>City of Mesa Transit</td>
<td>State</td>
</tr>
<tr>
<td></td>
<td>City of Phoenix Parks &amp; Rec</td>
<td>City of Mesa Transportation</td>
<td>City Council</td>
</tr>
<tr>
<td></td>
<td>Phoenix transit/Valley Metro</td>
<td>City of Mesa Engineering</td>
<td>Valley Metro</td>
</tr>
<tr>
<td></td>
<td>MAG Heat Relief Network</td>
<td>City of Mesa Parks &amp; Recreation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>County Hospital</td>
<td>Maricopa County Health Improvement District</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AZ Dept of Health Services</td>
<td>Mesa Public Schools / Charter Schools in the area</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>City of Mesa Electric / SRP / APS</td>
<td></td>
</tr>
<tr>
<td>Community Orgs</td>
<td>Salvation Army</td>
<td>Community Bridges / Center of Hope</td>
<td>Comité de Madres (CHISPA)</td>
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<tr>
<td></td>
<td>Senior Center</td>
<td></td>
<td>Spaces of Opportunity</td>
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<tr>
<td></td>
<td>Phoenix Revitalization Corporation</td>
<td>RAILMesa</td>
<td></td>
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<tr>
<td></td>
<td>Trans Queer Pueblo</td>
<td>Catholic Charities Care Campus</td>
<td>Puente</td>
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<tr>
<td></td>
<td></td>
<td>A New Leaf / Mesa CAN</td>
<td>Unlimited Potential</td>
</tr>
</tbody>
</table>
Mesa Care Neighborhood/Water Tower Improvement District Heat Action Plan
Water Tower Improvement District - CARE Neighborhood

What does CARE stand for?
Why In The World Would We Participate With THESE People?

Research projects strip-mine goodwill from the community.

CHANGE MY MIND
What Worked in Mesa

• Involve residents from the beginning
• Understand issues of the community itself
• Develop social capital - not extractive
• Collecting neighborhood stories
• Two-way, level communication with academic and neighborhood experts
• Understanding neighborhood context - where to meet, how to communicate
• Working with kids
• Food & Childcare
Understanding the Context

• Before even starting interaction, understanding the community
• Sunbelt city disconnection
  • Geography and social networks not well-linked
• Who is already organized in the neighborhood, where are natural connections and partners?
• Day of the week and time of day
• Meeting location
  • Eagles Community Center - Not what we hoped
Meaningful Involvement

- Design of the program included collaborative - and iterative - engagement. Collaboration to meet, and respond to, the needs of the community.
- Involve community members at the earliest stage.
- Be flexible.
Mapping Hot & Cool Spots
Scales of Problems and Assets

[Image of two maps showing scales of problems and assets]
Leave it Better than You Found It
Frequent, Meaningful Contact

- Usual stuff:
  - Knocking doors
  - Leaving flyers
  - Talking with people door-to-door
- Collecting stories
- Texts & phone calls
- Paying for participation
- After-school program
- Zine survey (Minneapolis)
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Asset Sharing

- Two-way, level communication with academic and neighborhood experts
- Setting norms that everyone is learning
- Not “top down” education, but bringing knowledgeable people together
- Fishbowl
Return Anything Gathered

• Any data gathered in the community is owned by the community
• Commitment to return, in meaningful way, anything collected
1. The need for shade, especially along routes to school or during long wait times at traffic lights
2. Lack of access to drinking water
3. Connectivity from community to broader transportation routes
4. Safety for children and elderly, especially for those living alone
5. Need for advocacy for urban heat solutions
Solution Story – one example

MORE, BETTER SHADE

• Install shade on hot walking routes, especially along Broadway to school
• Reduce wait times at traffic lights; stop in all directions, diagonal crossing
• Use vertical shading at bus stops and corners
• Community fund for tree maintenance and planting
• Plant trees in retention areas
Lessons Learned

✓ Community-based organizations are an essential part of the process
Lessons Learned

✓ Solutions were generated by bridging grassroots wisdom and evidence-based urban heat solutions.
Lessons Learned

✓ Community heat awareness and heat action building is a slow build

Dealing with “The Collective Shrug”
Lessons Learned

✓ Taking the time to build trust resulted in expanding participation and interest
Lessons Learned

✓ Need to be flexible as the process unfolds
Lessons Learned

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✓ Solutions were generated by bridging grassroots wisdom and evidence-based urban heat solutions.

✓ Community heat awareness and heat action building is a slow build

✓ Taking the time to build trust resulted in expanding participation and interest

✓ Need to be flexible as the process unfolds
Disclaimer!

“Replicating this: you can’t take this and hope to replicate elsewhere, readymade. The approach is something that works because it is developed organically based on the team and its context”

-Core team member in exit interview
Whole Measures for Urban Heat

Justice and Fairness
Conservation for All

Community Engagement

Economic Vitality

Community Resilience
Objective 1.01: Prioritize heat solutions that provide environmental benefits for under-resourced communities

<table>
<thead>
<tr>
<th>MEASURES (OF SUCCESS) or METRICS</th>
<th></th>
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<tbody>
<tr>
<td>NEGATIVE (-3)</td>
<td>Projects with known possible negative impacts are given high priority despite knowledge of impacts (for example, decreased access to public transportation, job loss, loss of housing, increased flood impacts).</td>
</tr>
<tr>
<td>NEUTRAL (0)</td>
<td>The potential negative impacts of projects on the community are considered, but projects that provide clear benefits are not prioritized.</td>
</tr>
<tr>
<td>MODEST (+3)</td>
<td>Projects that result in some direct quality-of-life improvements are given additional weight when prioritizing strategies.</td>
</tr>
<tr>
<td>STRONG (+5)</td>
<td>Projects that are likely to result in clear, measurable, positive impacts on health and other components of well-being are prioritized.</td>
</tr>
<tr>
<td>HIGHEST IMPACT (+10)</td>
<td>Highest priority is given to projects targeting problems in under-resourced communities. Projects are designed and implemented in response to the community’s self-identified needs and priorities. Projects are successful in creating measurable improvements in health and well-being.</td>
</tr>
</tbody>
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Questions?

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