



**CITY
INNOVATION
STUDIO**

at **BLOOMBERG CITYLAB**

Problem-Solving with Gen AI

Innovation Sprint

Icebreaker

How would you characterize your attitude towards Gen AI?

- Adventurousome
- Deliberate
- Skeptical

The Challenge

- The Mayor has asked your innovation and data team to **demo Gen AI tools** to address their priority mission of mitigating heat exposure for residents
- You will present to city council: a **prototype solution** and your **insights** on the public value of Gen AI

References

The Path to Public Innovation Playbook + Toolkit

Research: Consensus <https://consensus.app/>

AI assistants: Perplexity <https://www.perplexity.ai/>

ChatGPT <https://chatgpt.com/>

Gemini <https://gemini.google.com/>

Copilot <https://copilot.microsoft.com/>

Claude <https://claude.ai/>

Graphics: Midjourney <https://www.midjourney.com/home>

Some Tips for Prompt Design

**Inspired by the City of Pittsburgh*

- **Specify a format**

What information do you want? text, chart, etc

- **Use a verb**

Clearly direct the tool to 'summarize', 'draw', 'label'

- **Provide context**

What are the critical details needed? Why are you asking?

- **Offer an example**

Have you seen something that you want this to look like?

- **Adjust. Adjust. Adjust.**

You may need to modify your requests slight for clarity. Repeatedly

City of Sunville

- 1.6 million people
- Booming economy due to green technologies
- Housing affordability challenges
- Infrastructure investment has kept pace
- Large grant to improve resilience of infrastructure and resident quality of life

Ambitious and Impactful Mission

Problem Frame

The goal of the City of Sunville is to improve residents' quality of life by mitigating heat exposure and eliminating heat related mortality by 2030

- Sunville is experiencing extreme temperatures for over half the year
- This is a problem for residents of historically marginalized neighborhoods
- Heat exposure increases the risk of negative health outcomes

Research – 15 min

- Explore the problem frame to build a deeper understanding of the problem
- How would you reframe the problem statement?

Playbook pages 39-43

Experiment...

- Benchmark other cities
- Root cause analysis
- Lit review
- Resident interviews/ interview guide

Ideate – 15 min

- Ask 3 “how might we...” questions
- Use your questions to generate creative ideas
- Build a portfolio of solutions

Playbook pages 44-47

Experiment...

- Simulate perspectives
- Problem zoom
- Borrow and adapt
- Futurecast

Prototype – 15 min

- From your portfolio of solutions, produce 3 low-fidelity prototypes

Playbook pages 60-63

Experiment...

- Storyboard
- Digital mockup
- Communications product

Reflection + Presentation – 35 min

As a group, reflect on the exercises and share

- What was “inside the frontier”?
- What was “outside the frontier”?
- What is actionable for Sunville?
- What is important for residents?

Produce a 5-min presentation for the city council with these reflections and include one prototype – why did you choose this?

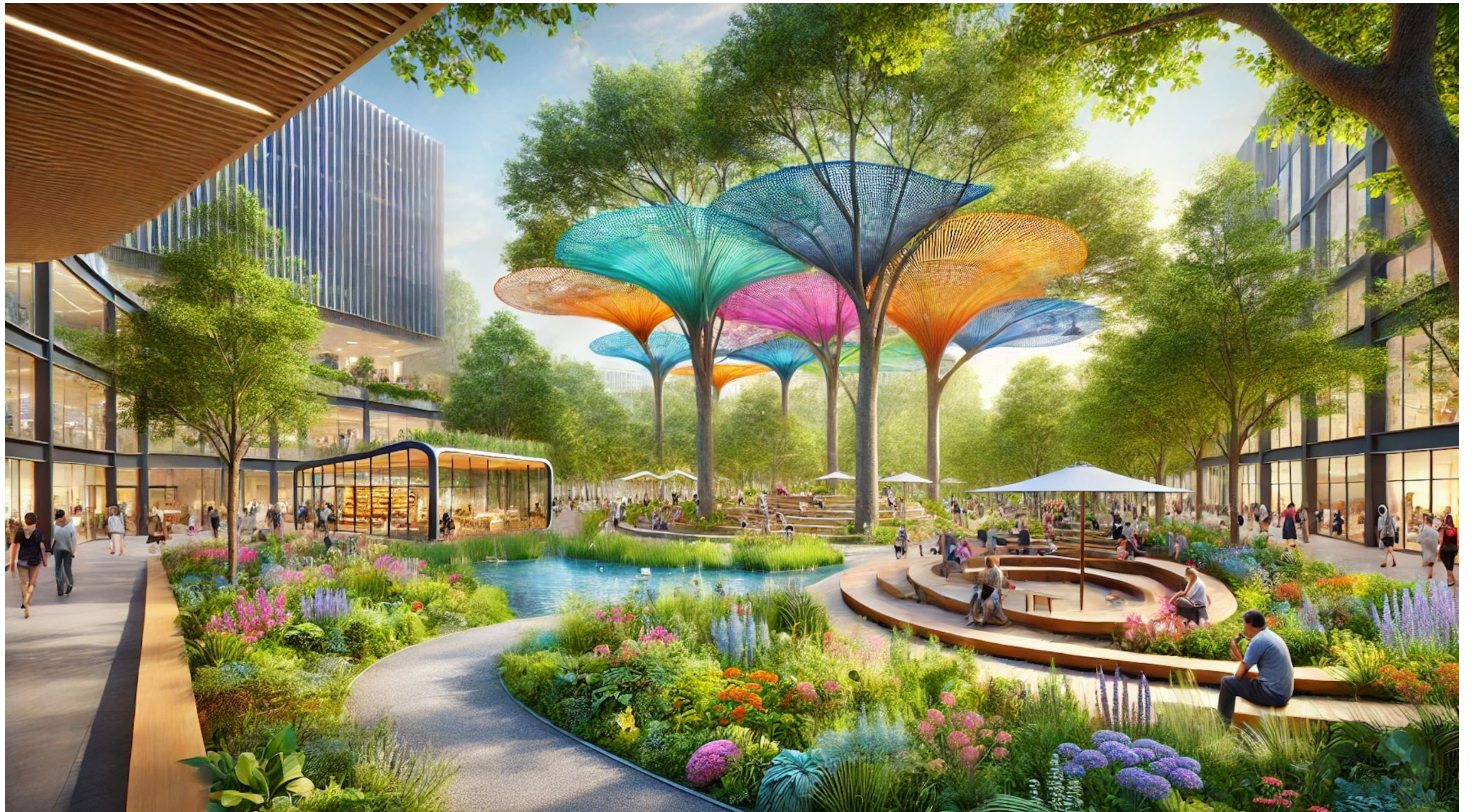


Room 1

A Heat-Mitigation Prototype

Reframed Problem Statement:

Sunville's historically marginalized neighborhoods are disproportionately vulnerable to heat-related health risks due to systemic inequities and climate change.



CITY INNOVATION STUDIO

at **BLOOMBERG CITYLAB**

What's "Inside the Frontier"

- *Identified data sources*
- *With deeper prompting, generated outside the box ideas*
- *Created aspirational images for what the park could look like*
- *Generates MVP templates and project documentation*

What's "Outside the Frontier"

- *Jumped to conclusions about the populations we were serving*
- *Only addressed those who were able to go to the park*
- *Did not address homebound & disabled residents*
- *Bad at ranking and prioritization*

Lessons for Sunville

- *When using AI, be specific about the populations you are serving*
- *Target locations, climates, and conditions*
- *Know the limitations of budget, because an AI tool will not*

We recommend using AI tools for creative ideas including new technologies. It's aspirational and helpful, but we need to layer on our best city thinking and keep digging.

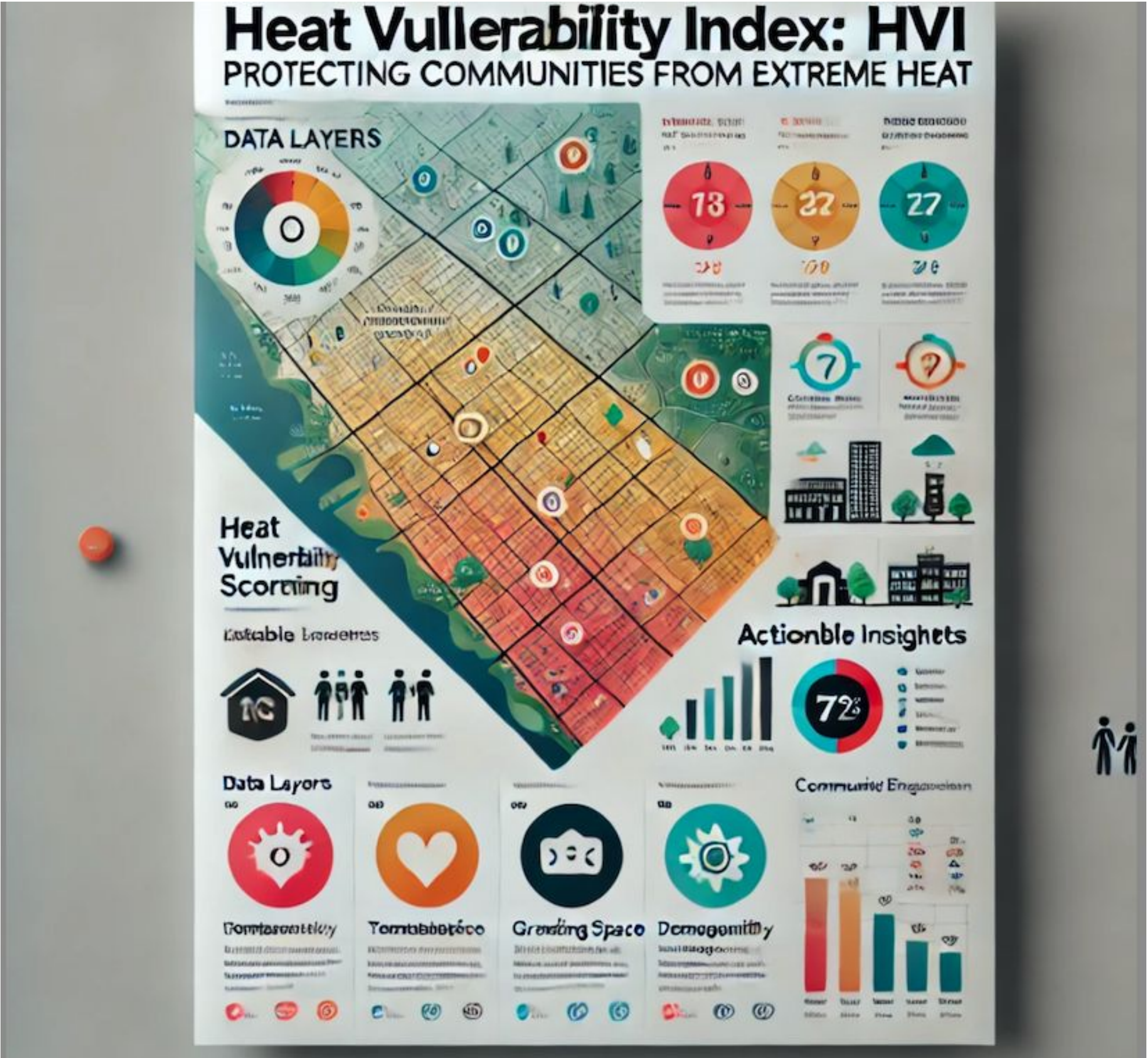
Thank you!

Amanda Daflos
Aparna Ramanan
Marguerite Allen
Jéssica Barcelos
Scot Barker
Michael Baskin
Stephanie Betteridge
Kirby Brady
Antonio Carvalho
Marcos Antonio de Oliveira
Becky Doyle
Jenny Durda
Gregory Kajszo
Aimee Kaslik
Ryan Kurtzman
Mariama N'Diaye
Severino Neto
Lindsey Parker
Kate Parmelee
Eva Pereira
Lindsay Quarles
Denise Riedl
Arna Ýr Sævarsdóttir
Angela Scanlon
Stephen Sherrill
Brian Smith
Tau Tavengwa
Elisângela Teixeira
Vasyl Teremta
Nole Walkingshaw
Ted White

Room 2

Keep it Cool, Sunville

A Heat-Mitigation Prototype



What's "Inside the Frontier"

- *The ability to quickly create tangibles that can be a great start to a design delivery process*
- *Idea generation was a major strength*
- *Pulling out comparable case studies from around the world*
- *Analytics*
- *Synthesizing large amounts of information*

What's "Outside the Frontier"

- *Being able to take the framing and ground it in the reality of what we can accomplish.*
- *Real community engagement, could never substitute for actual community engagement*
- *The over optimism in the platforms often is a very frustrating obstruction to the workflow*
- *You need actual subject matter expertise to debunk outputs of the platform*

Lessons for Sunville

- *Community engagement with the GenAi working in the background instead of leading.*
- *AI is not elected, they are tools used by people and people are in control. The human context will not be in the tool it must be brought to the tool.*
- *If we strengthen our foundational data practices then we can deeply inform our solutions, but if the data is garbage the solutions won't work*
-

Thank you!

Beth Blauer
Dan Hymowitz
Amerika Blair
Sylvine Bois-choussy
Edward Boze
Jennifer Brinkmann
Lindsay Cole
Daniel Collins
Eddie Copeland
Stephanie Deitrick
Manuel Dominguez
Dominic Dowling
Itai Eiges
Daren Ellerbee
Lakeeshia Fox
Penny Hagen
Tyneisha Harden
Andrew Hayhurst
Visraant Iyer
Kari Johnson
Jessica Lotz
Denys Nazarenko
Angelina Osadcha
Kali Pearce
Ly Pham
Oskar Sandholt
Bailey Afifi Siber
Dartanion Swift-Williams
John Whaling
Jasmine Worles



Room 3

Cool-A-Boration

Stay Cool, Stay Safe

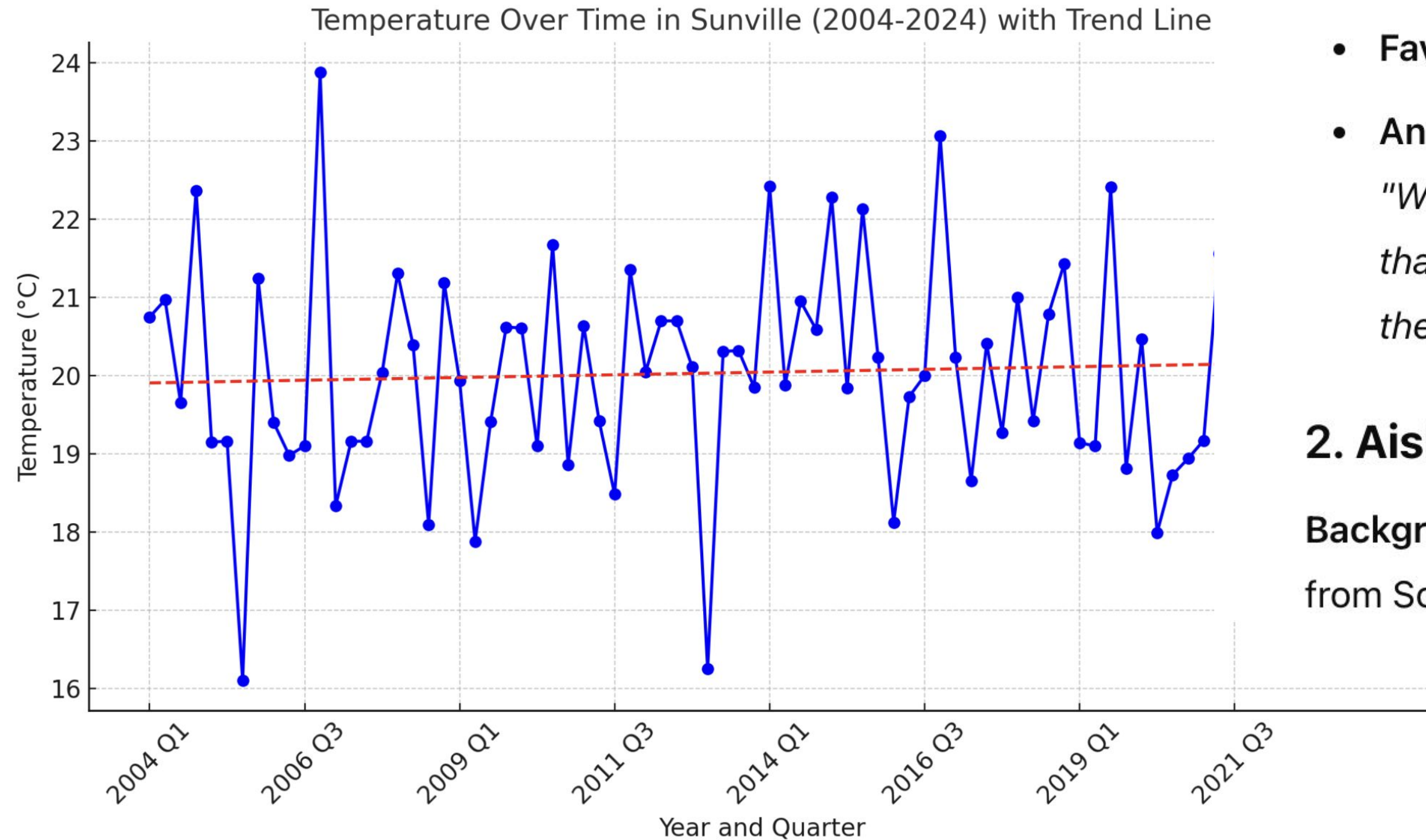
A Heat-Mitigation Prototype

Vulnerable workers are at high risk of heat related hazards

A heat alert system with movable cooling pods near worksites will save lives. Plus with solar powered HVAC, green roofs, and public art - these pods become community assets.

Synthetic data for weather and heat waves, synthetic community feedback on problem space

Temperature Over Time In Sunville (2004-2024) With Trend Line



1. Carlos Ortega

Background: Carlos is a 45-year-old agricultural worker from Mexico who has lived in Sunville for 10 years. He primarily speaks Spanish and works long hours in the fields picking crops during the hottest months of the year. He supports his family and often sends money back home.

- **Favorite Solution: Rotational Shifts and Climate-Controlled Break Pods**

- **Answer** (in translated English):

"When it's hot, we keep working because there's no other choice. Having a place to rest that's cool, even for a short time, would help a lot. I can't always take breaks, but if we had these pods, I think it would save many people from getting sick."

2. Aisha Muhammad

Background: Aisha is a 32-year-old mother of three who works in construction. She is originally from Somalia and has faced language barriers as her English is limited. Aisha is responsible for

City of Sunville Heat Safety

Choose Language: English 

Current Temperature: 37°C

Feels like: 42°C

High Risk - Take breaks every 15 minutes!

Next break in: 15 minutes

Health Tip: Drink water every 20 minutes.





CITY INNOVATION STUDIO

at **BLOOMBERG CITYLAB**



Cooling Pod Budget Comparison

	Materials	Cost (Standard - USD)	Cost (Recycled - USD)
1	Wood (Plywood and framing)	500 - 1000	100 - 300
2	Cardboard (walls)	50 - 150	Free - 50
3	Movable HVAC Unit	400 - 800	400 - 800
4	Basic insulation	100 - 300	50 - 150
5	Labor (Assembly and Deployment)	1000 - 2000	800 - 1500
6	Recycled Materials (wood and cardboard)	N/A	100 - 300

Project Plan: Cooling Pods Prototype Deployment

Phase	Task	Duration	Lead	Deliverables
Design & Planning	Finalize pod design	1 week	Project Manager	Finalized design specifications
	Confirm sites and procurement needs	1 week	Procurement Specialist	Material list, site list
Sourcing & Construction	Source materials (Standard & Recycled)	2-3 weeks	Procurement Specialist	Purchased/sourced materials
	Build pods	2-3 weeks	Construction Supervisor	5 cooling pods assembled
Deployment & Setup	Transport pods to sites	1 week	Logistics Coordinator	Pods delivered to locations
	Install pods on-site and connect HVAC	1 week	Site Supervisor, Electricians	Fully installed pods
Training & Awareness	Train workers and supervisors	1 week	Health and Safety Officer	Workers trained on pod usage
Monitoring & Feedback	Monitor pod usage, gather feedback	4 weeks	Data Analyst, Site Manager	Feedback report
Evaluation	Evaluate success and iterate on design	1 week ↓	Project Manager	Final evaluation report

What's "Inside the Frontier"

- *Understood the process*
- *Created structure*
- *Best practices*

What's "Outside the Frontier"

- *The tool tends to lead solutions*
- *Many trivial solutions - we knew the solutions*
- *Not localized - the system is generalized*
- ***Difficult to do work as a team with the tool***

Lessons for Sunville

What is actionable

- *Communication strategy*
- *Prototyping (fail fast, fail cheap)*
- *Green infrastructure ideas - integrative*

What is important to residents

- *Sharing with residents what is the methodology*
- *The cost!*
- *Equality*
- *Transparency*

Thank you!

Amy Holmes
Roland Persaud
Adam Al Afenish
Andrea Apolaro
Stephen Barham
Jose Carrillo Atondo
Antonio Colin Canizales
Anne-Marie Croce
Nicolas Diaz
Racheli Elkayam Rosette
Cherlene Floyd
Santiago Garces
Avigail Gutman Amit
Venecia Guzman
Tomas Hoffmann
Nicholas Lucius
Francisco Medina Niembro
Javier Morales
Fernando Nonino
Damián Pintos
Carlos Riveros
Guillem Serra
Terrance Smith
Carlos Soberanis
Angel Tamariz Sánchez
Tali Tavlan
Brenda Treviño
Megan Williams
Jonathan Williams-Kinsel
Marquis Willis
Sivan Zelovitch Keren

Room 4

SOL AND SOMBRA SOLUTIONS



SUN *and* **SHADE**
•• SOLUTIONS ••

A Heat-Mitigation Prototype

Extreme heat events disproportionately affect low-income children's ability to learn in school due to physical impacts and the closure of schools during heat events, jeopardizing the long-term viability for an equitable Sunville

This technology and visual image may inspire senior leaders to invest in this aspect of the problem frame with long term infrastructure solutions to mitigate heat and promote learning and health



What's "Inside the Frontier"

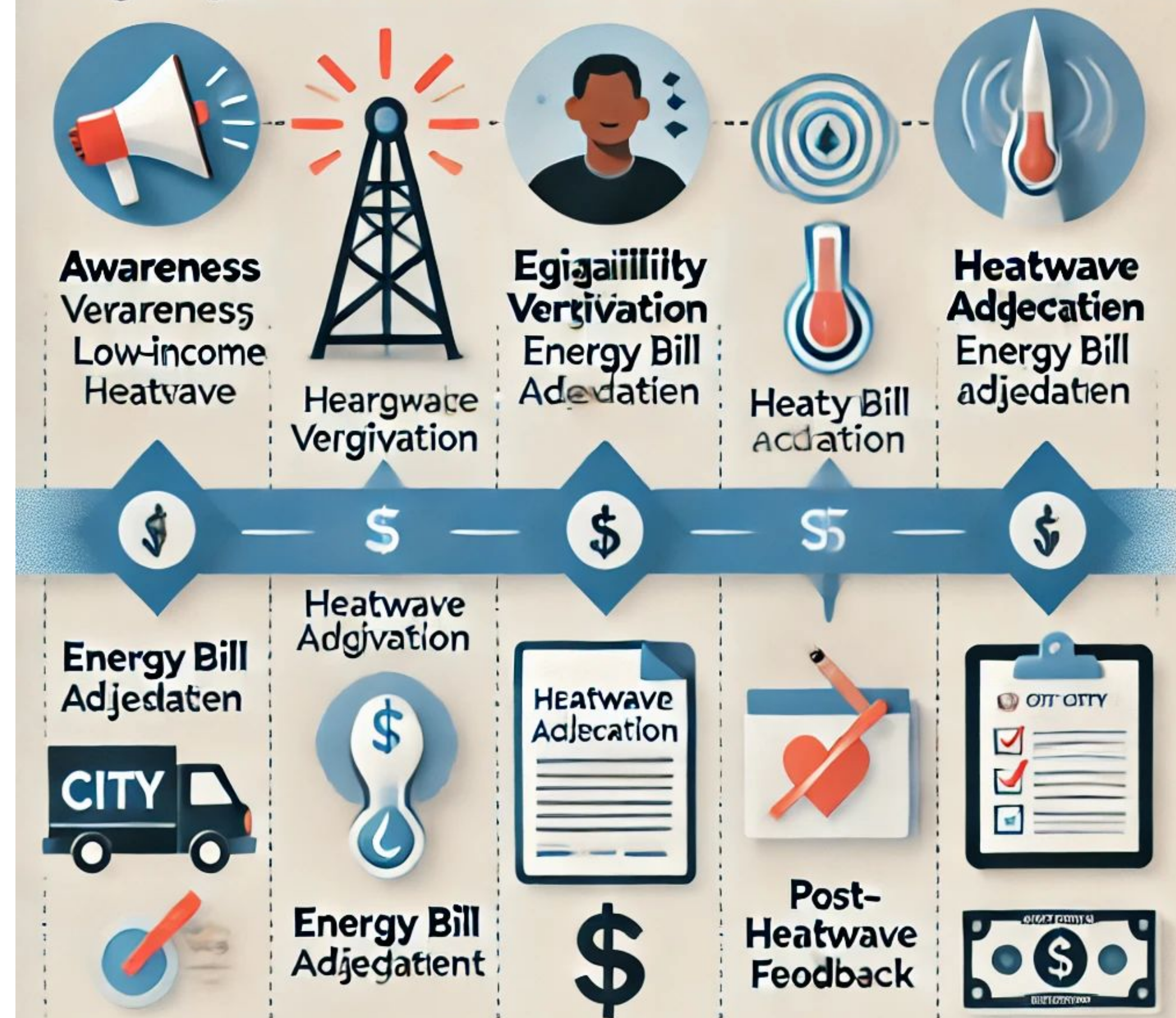
- *We could upload and build problem frames off of photos*
- *Able to generate ABCD based interview guides for conducting qualitative research customized to experience levels (novice, pro)*
- *It was able to plot a portfolio of ideas against ease of implementations and impact though it would need further exploration*
- *Generating impact metrics that it turned into a mock dashboard*
- *Is able to provide further recommendations about how to improve initial matrix*
- *Good at verbal description of user journeys*



What's "Outside the Frontier"

- It cannot tell us what URLs to look at that already exist or literature review for sources, but it can tell us fake URLs to consider (Claude)
- It gave us inaccurate calculations for budgeting considerations
- Gemini had difficulty coming up with creative solutions
- Not good at generating images
- Very inaccurate spelling
- Generating diverse representation of populations and imagery

A City's Energy Bill Forgiveness Program Targeting low-income residents during heatwaves



Lessons for Sunville

- *Do not ask this to make decisions about budget or anything involving specific culture inputs.*
- *The more specific prompts given from the playbook or other sources, the better the outcomes were: iterate, iterate, iterate*
- *Cross technology uses are as important to generating better ideas, much like diverse teams generate*
- *It is still critical to be able to effectively facilitate humans in the process of using Gen AI Tools*
- *Ability to conduct basic research more to save time to focus city staff time on doing more in-depth and targeted community engagement*



Thank you!

Justin Entzminger

Stephanie Wade

Brendan Babb

Laura Ballek Cole

Kait Bell

Theo Blackwell

Angela Brown

Stephen Caines

Daniel Culotta

Jayson D'Alessandro

Debbie Dekkers

LaTisha Fletcher

Dawn Giambalvo

Andrew Holland

Francesca Ioffreda

Victoria Itskovych

Robert James

Lauren Kirk

Natasha Main

Kateryna Mohylnytska

Conor Muldoon

Heidi Norman

May Ouyang

Kyle Patterson

Leila Pedersen

Nicole Raimundo Coughlin

Kiyoshi Robson

George Sarkissian

Liza Soydan

Petr Suska

Courtney Zinn

The logo features a central light green circle with a stepped, pixelated edge. This circle is surrounded by a larger, darker green circle, also with a stepped edge. The entire design is set against a background of a blue circle with a stepped edge, which is itself centered on a light blue background.

Bloomberg
Philanthropies