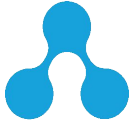




# AISL Awardee Meeting 2026

**Stories from WaterSIMmersive:  
Leveraging emerging technologies  
to improve water resiliency across  
Arizona**

# Today's presenters



**Amber Hedquist**  
Research Specialist  
Faculty Associate



**Claire Lauer**  
Professor  
Senior Global Futures Scientist

# Agenda



**Background & Goals**

**Approach**

**Examples**

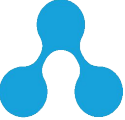
**Takeaways**

**Q & A**



# Background and Goals

# About



**Overview:** WaterSIMmersive is a traveling museum exhibit designed with several localized, interactive components (MR, VR, AI) to help Desert Southwest communities understand water sustainability.

**Mission:** Empower Arizona communities to navigate their water situation to support community resilience.

# Upcoming Museum Locations

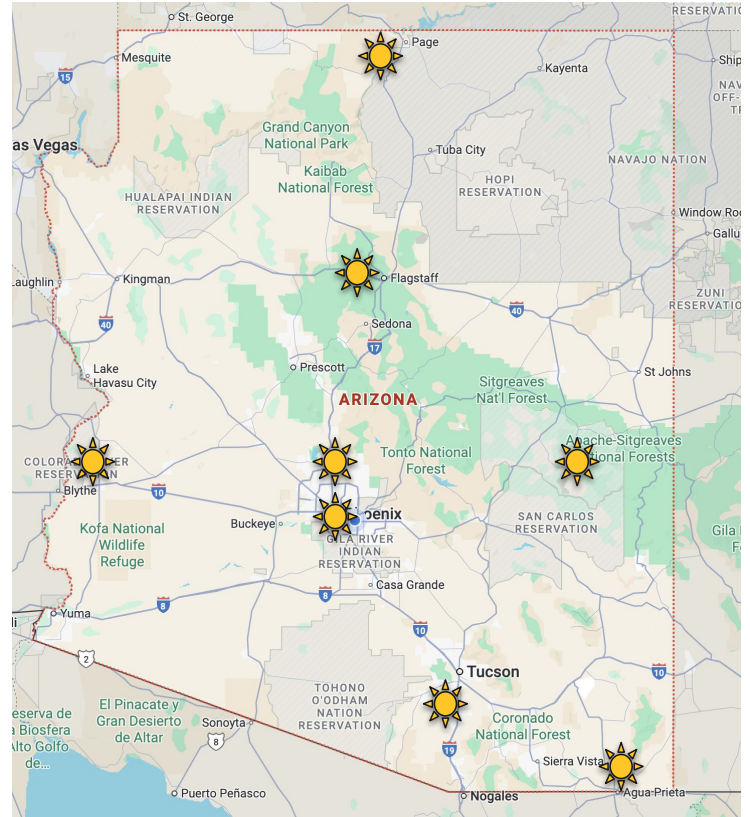
## Fall 2025:

- Black Canyon City
- Bisbee

## Spring 2026:

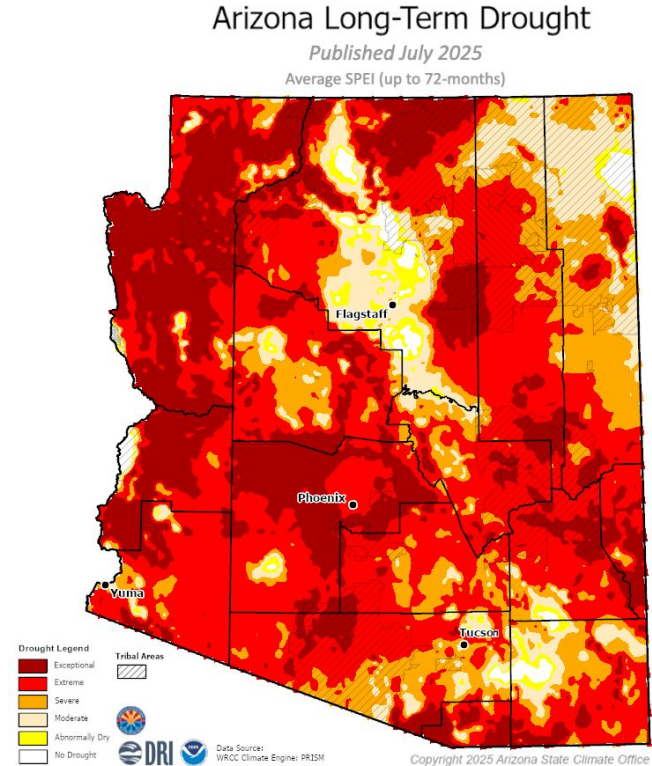
- CRIT or White Mountain Apache
- Tubac

**Other locations:** AZ Science, Page, Miami-Globe, as well as AWII groundwater workshop sites like Flagstaff, Prescott, La Paz county, and Sierra Vista.



# Project Significance

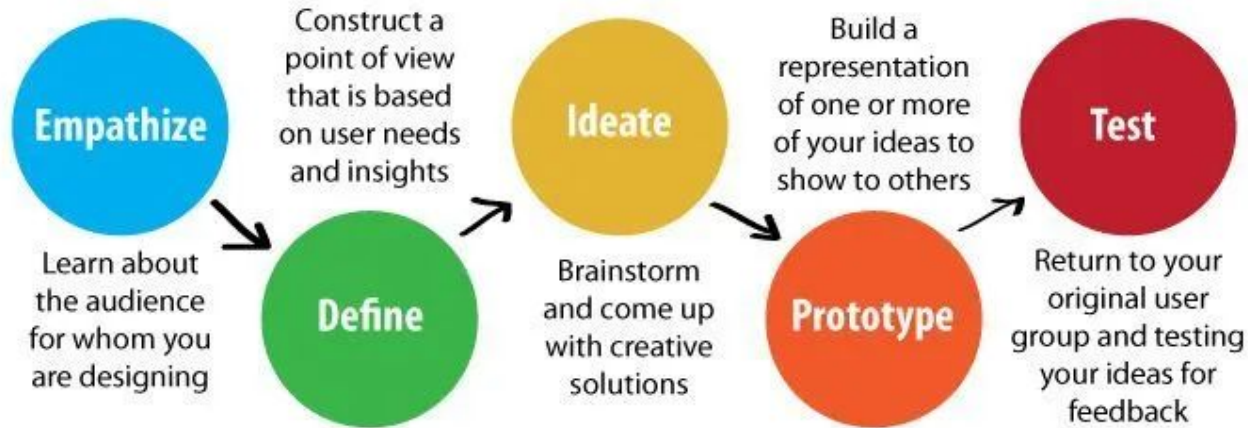
- The U.S. Southwest is experiencing its **most severe megadrought in 1,200 years**
- Public understanding of complex water systems is critical for long-term resilience
- Museums rarely provide interactive access to dynamic scientific modeling tools
- Underserved rural and urban communities are often excluded from water policy conversations





# Approach

# Utilizing a user experience (UX) framework



## Focusing on:

- **Interviews:** Understanding of water based on lived experiences
- **Field observations:** Live interaction, what they lingered on, and what didn't resonate
- **Iterative feedback:** Test ideas early, learn quickly, and refine

# Co-designing with communities

## Co-design informed...

1. **Games** we developed
2. **Exhibits** we designed
3. **Community stories** we emphasized

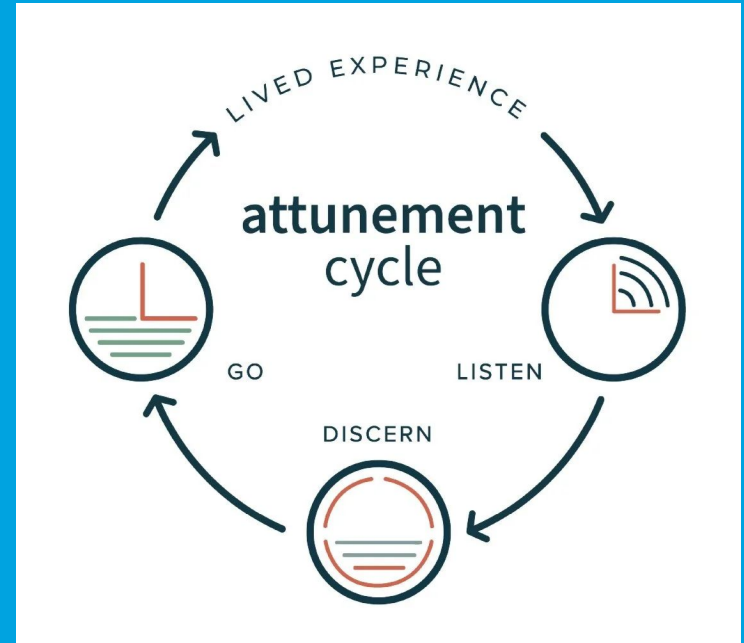




# Examples

# 1. How can we improve how we listen for reciprocal opportunities?

We cultivated what we refer to as **rhetorical attunement**: a commitment to listening for and responding to difference.



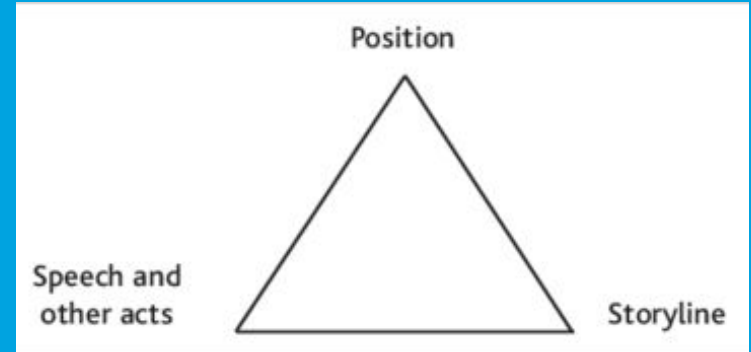
## 2. How can we center community voices?

We created a community storymap that highlights community members, prominent water concerns, and key historical events.



### 3. How can we capture community narratives?

We utilized **positioning theory** to understand prominent narratives and self/other positionings in the community.



# Case study: Working with Black Canyon City

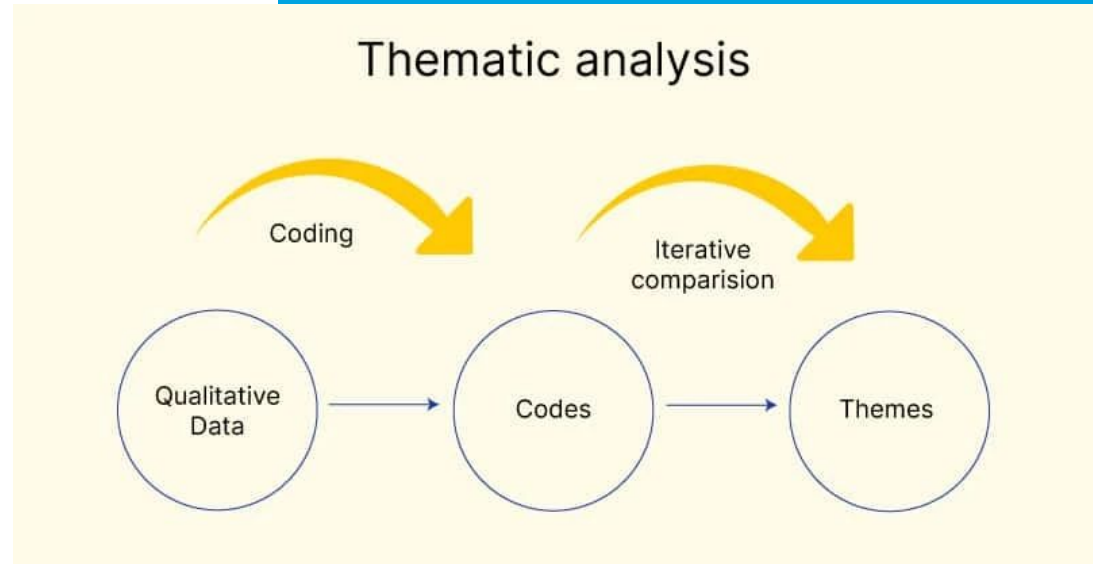
- We recruited two community researchers
- Each researcher conducted ~20 interviews
- We collected **40+ interviews** that we transcribed and prepared for coding.



# Why was thematic coding insufficient?

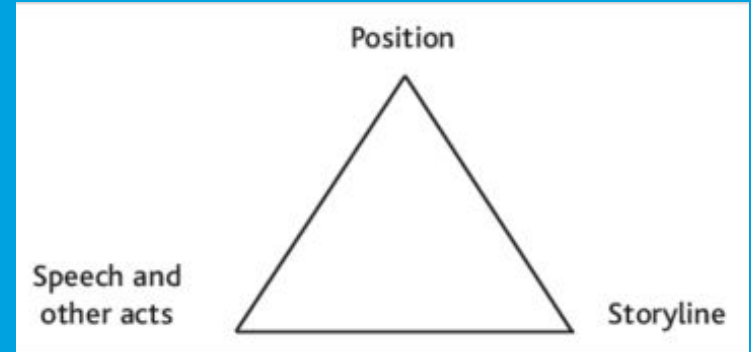
It was difficult to...

- Narrow down codes
- Translate insights
- Achieve IRR



# How can we analyze community narratives?

We pivoted to **positioning theory** to understand prominent narratives and self/other positionings in the community.



# Positioning Theory (Harré & van Langenhove)

A framework for analyzing how people use discourse to locate themselves and others within unfolding storylines.

Positioning theory draws on a triadic framework:

1. **Positioning:** rights, duties, and moral responsibilities of self and others. Positionality influences how individuals behave, interpret, and interact in social contexts
2. **Storylines:** the unfolding narrative within which positions make sense
3. **Speech acts:** the communicative moves that enact or resist positions

# Positioning Theory (Harré & van Langenhove)

A framework for analyzing how people use discourse to locate themselves and others within unfolding storylines.

We developed a 15-actor codebook across four domains:

- **Moral** (Responsible, Irresponsible, Concerned, Indifferent)
- **Knowledge** (Informed, Uninformed, Misinformed, Educator)
- **Affective** (Grateful, Skeptical, Trusting)
- **Power** (Empowered, Disempowered, Victimized, Gatekeeper/Villain)

# Positioning Theory (Harré & van Langenhove)

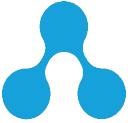
A framework for analyzing how people use discourse to locate themselves and others within unfolding storylines.

We **stopped** asking:

“What themes should the exhibit cover?”

And **started** asking:

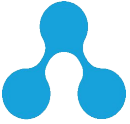
“What positions are visitors likely to bring into the space?”



# Pattern 1

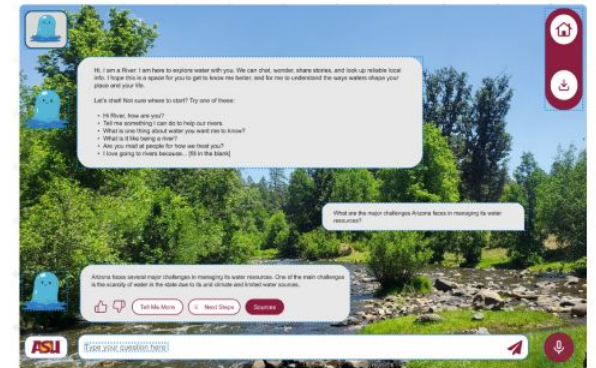
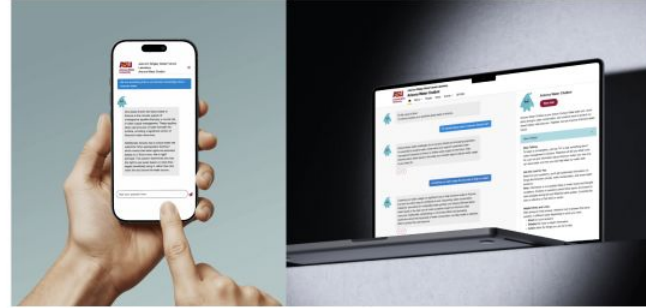
## The Uninformed and Concerned Self

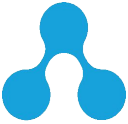
“Sometimes it’s clear and then sometimes it’s cloudy. Makes me wonder if there’s any chemicals in it. Worried about my kids.”



# Water Chatbot / River Bot

## Design 1



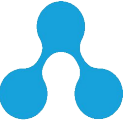


## Pattern 2

### Responsible at Home, Disempowered in Systems

“I try to be conscious of the water that I use here. When I take a shower, washing my hair. I turn water off and on with dishes.” (P25)

“...go into [it] complaining or try to go to a meeting and get ushered out by the sheriff because [they] don't like you being there.” (P41)



# Storymap

# Design 2



Meet Some of the Featured Voices From Black Canyon City!





# Takeaways

# What advice do we have for CER teams?

Prioritize...

- Iteration
- Reciprocity
- Attunement



# Our main takeaway

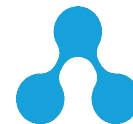
Iterative development needs to be planned and budgeted for in community-engaged projects.



## Take a moment to reflect!

- When have you had to pivot with community partners?
- What institutional constraints shaped that flexibility?
- What stories emerged from those pivots that wouldn't have surfaced otherwise?





**Thank you! Any questions?**