



# TRANSDISCIPLINARY COLLABORATIONS TO ENHANCE INTERACTIONS WITH COMMUNITIES AT CONTAMINATED SITES

US EPA Community  
Involvement Training  
Conference  
Atlanta, GA  
August 5, 2015

# SESSION OBJECTIVES

- Define transdisciplinary collaboration
  - Provide example
- Explain benefits and challenges
- Explore collaboration opportunities in your work
- Identify steps you can take to practice transdisciplinary collaboration

Presentation

World Café

# SESSION OUTLINE

- Presentation (25 min)
- Q & A (10 min)
- Small group “World Café” discussions (40 min)
- World Café report back (10 min)

# PRESENTERS & DISCUSSION LEADERS

**Ben Gerhardstein**, ATSDR Region 9

**Rose Eitemiller**, Community Coalition of  
Dewey-Humboldt

**Amanda Pease**, EPA Region 9

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Superfund Research Program

# Iron King Mine/Humboldt Smelter Superfund Site

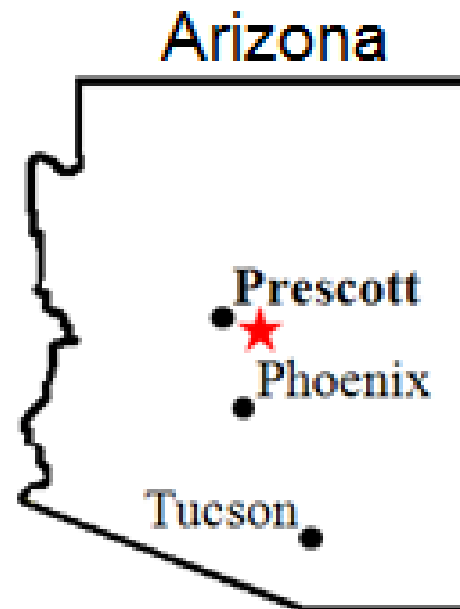
Dewey-Humboldt, Arizona

## Superfund Site

- Former mine/smelter site
- Arsenic and lead in home yards
- Remedial Investigation/ Feasibility Study to be completed this year

## Non-Superfund Site Community Concerns

- Elevated arsenic levels in public water and private wells (naturally-occurring)



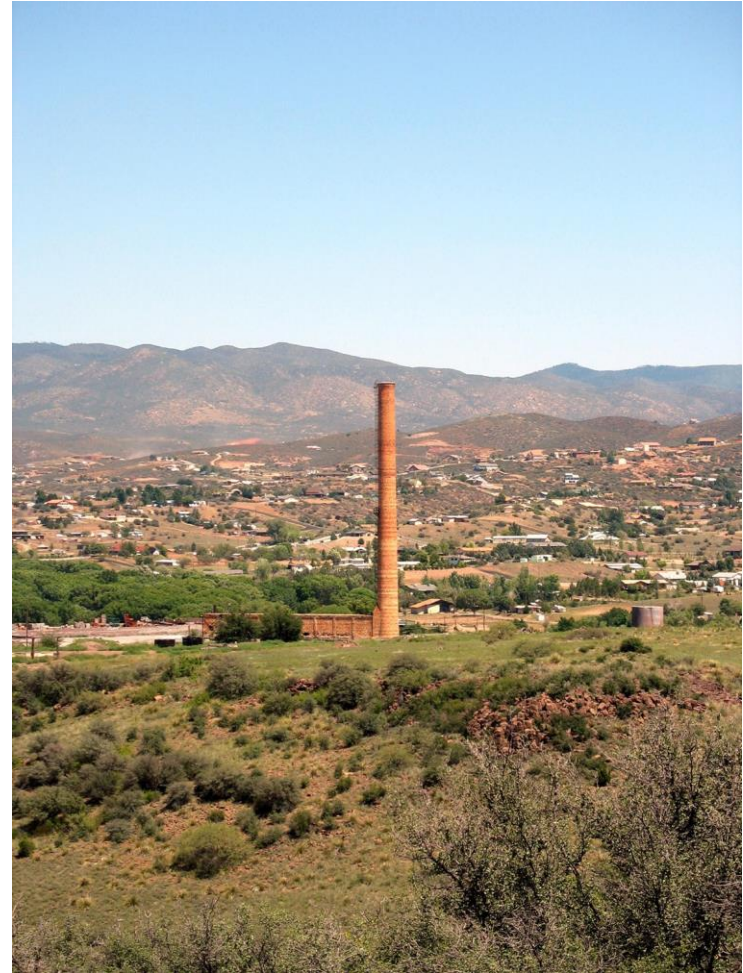


# EPA community involvement approach at this site

**Goal:** Provide relevant Superfund site information to community members and opportunity for input into the Superfund process, while being responsive to bigger picture community concerns

## **Current approach:**

- EPA and Town Council meetings
- Factsheets and town newsletter mailings
- Technical Assistance Grant
- Responsive to community calls
- Collaboration and referrals



# COLLABORATION FROM A COMMUNITY PERSPECTIVE

Community: a group of people living in the same place with a feeling of fellowship with those around them, sharing some **common** attitudes, interests, and **goals**.

Collaboration: the action of working with others for a **common goal** or the greater good of something or someone.

# WHAT MAKES GOOD COLLABORATION FROM THE COMMUNITY PERSPECTIVE?

- Clarify the roles and responsibility of each organization
- Honesty
- Respect the community and others you are working with
- Outline goals, outcomes, rationale, and timeline for each task
- Planning, commitment, and courage



# DO DEWEY-HUMBOLDT COMMUNITY MEMBERS:

- Know the organizations working in the community?
- Understand each organization's role?
- See benefits from collaboration?
- Receive clear, concise information?
- Have additional needs?



# Hazardous Waste and Contaminated Sites Pose a Unique Set of Challenges

Complex

Persistent

Multifactorial

**Progress in implementing solutions is slow,  
this delay can be attributed to lack of:**

Collaboration

Information transfer to  
the end-user

Partnership building among  
academia, industry, government  
and the affected community

Experts and practitioners from various disciplines have suggested approaches to address societal challenges related to ecology, environment, human health, and education



## Public Health

*Community-based participatory research*

*Community Capacity*

*Street science*

*Health Promotion*

## Community Psychology

*Community science*

## Communication

*Environmental Communication*

*Risk Communication*

## Sociology, Social Psychology, and Philosophy

*Participatory Action Research*

*Popular Epidemiology*

*Popular Education*

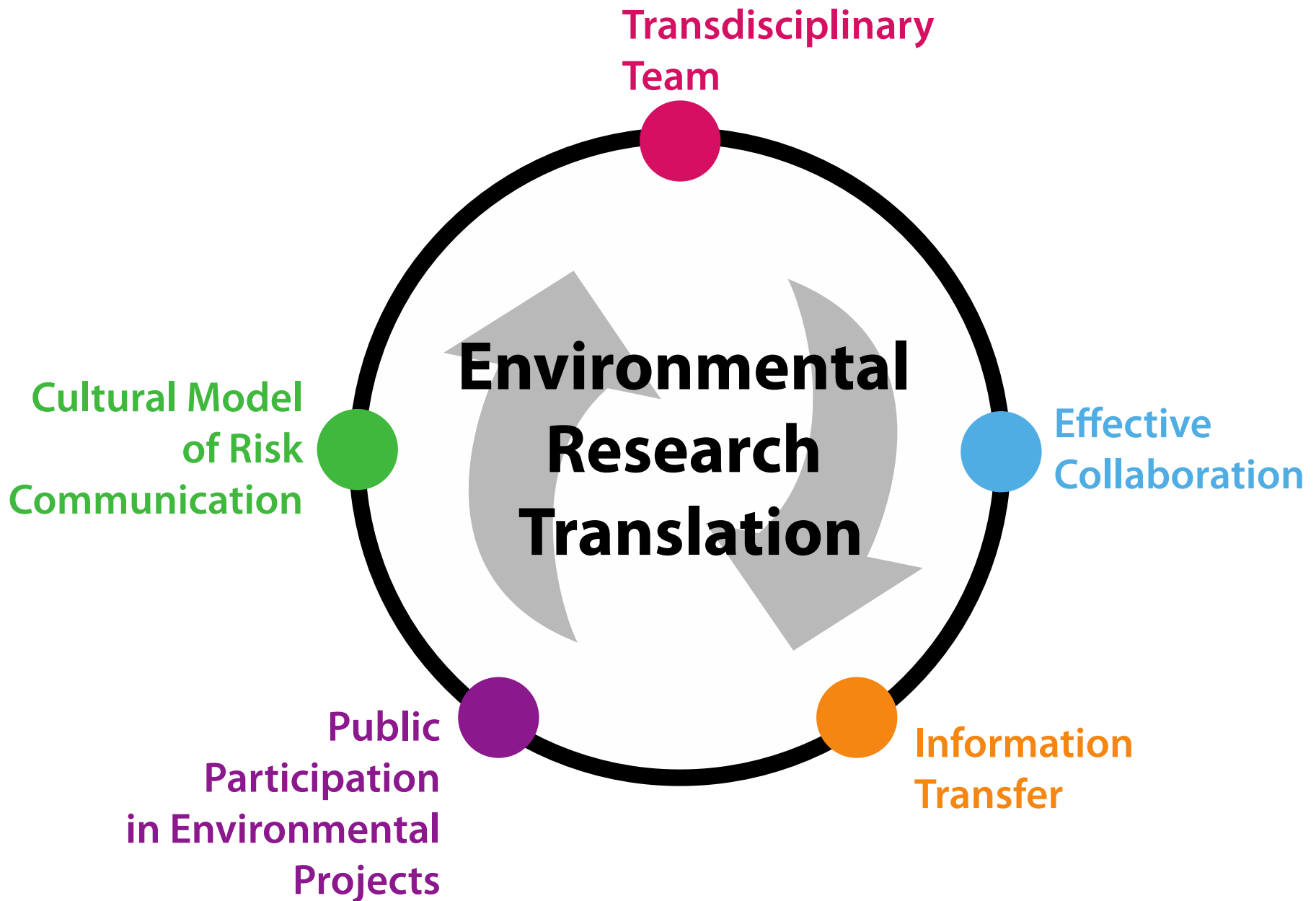
## Anthropology

*Science and Technology Studies*

## Education

*Informal science education*

*Public participation in scientific research*

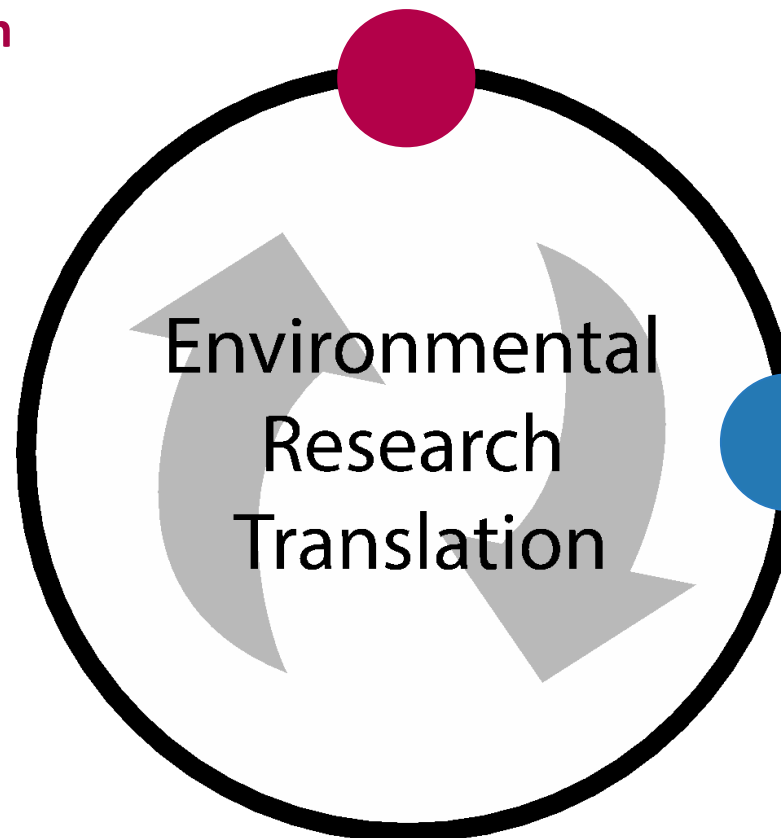




*ERT is a holistic framework for addressing the challenges inherent at sites.* **Today, we are going to focus on two pieces of ERT.**

**Transdisciplinary Team**

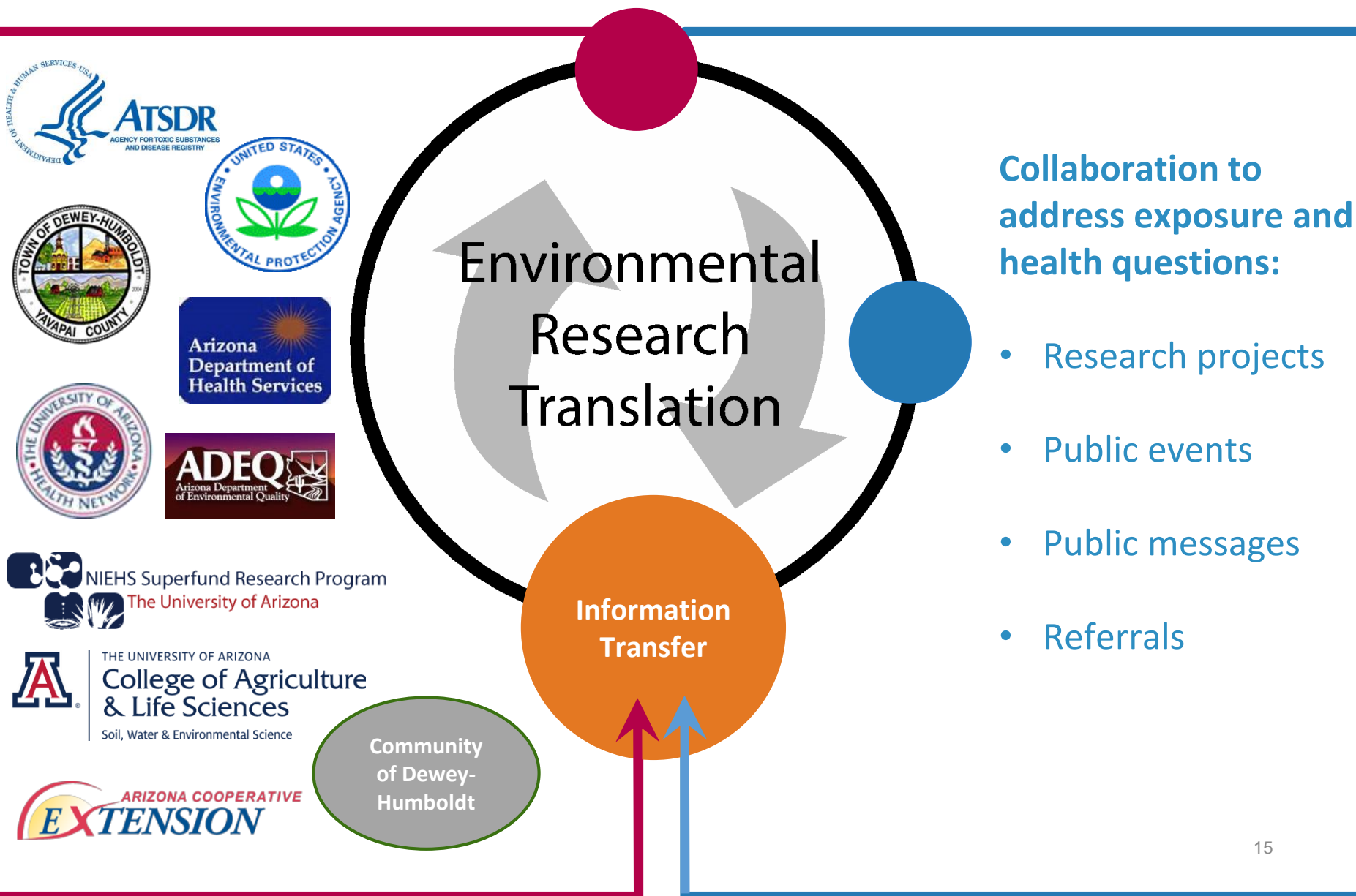
- Scientists, practitioners, and community members from multiple disciplines
- Engage in knowledge integration in a reflexive manner, and take on new ideas



**Effective Collaboration**

- Trust and open communication
- Emphasizes learning and power sharing
- Engage in community-based problem solving rather than advocacy and debate
- Often led by “champions” <sup>14</sup>

# Iron King Mine Example: Addressing community concerns through transdisciplinary collaboration



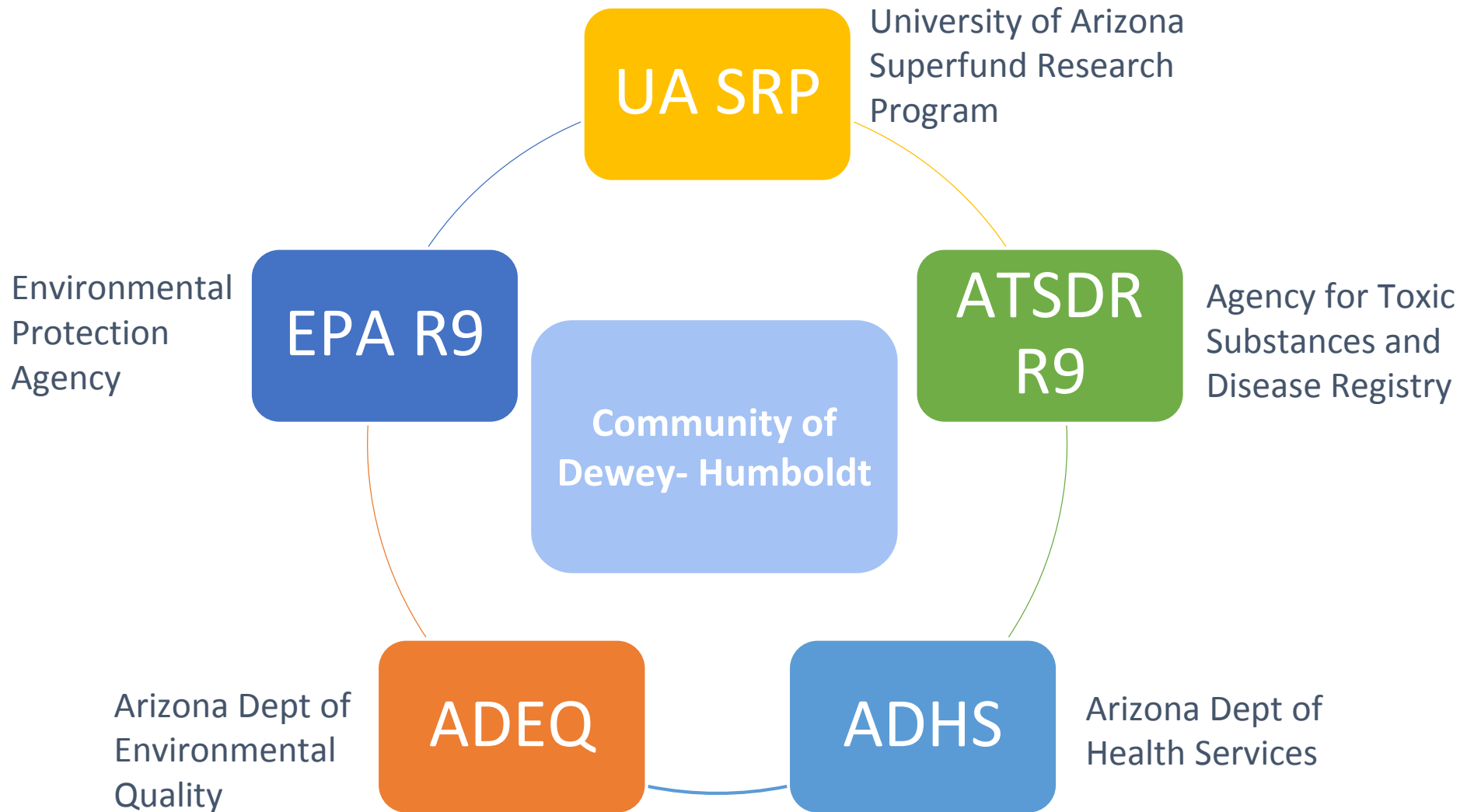
# TRANSDISCIPLINARY COLLABORATION AT IRON KING

## *A WORK IN PROGRESS*

- Phase 1: Late 2000s
  - EPA, Univ of Arizona, and community developed research projects
- Phase 2: 2013 – present
  - Multi-organization communication, collaboration, and technical assistance



# Current Iron King Transdisciplinary Team



# RECENT IRON KING COLLABORATION: WHAT GOT US GOING?

EPA-convened 2013 community meeting





# Collaboration made it possible to address many community concerns in one presentation

## Reducing Your Exposure to Arsenic and Lead

How can you be exposed?	What can you do?
Drinking water – private wells	<ul style="list-style-type: none"><li>• Test your water</li><li>• Consider adding a treatment system</li></ul>
Drinking water – Humboldt Water System (HWS)	<ul style="list-style-type: none"><li>• Contact HWS or ADEQ with questions</li><li>• If concerned, consider testing your water</li></ul>
Air (breathing in)	<ul style="list-style-type: none"><li>• Stay indoors during dust storms</li></ul>
Soil & dust (swallowing)	<ul style="list-style-type: none"><li>• Control dust in your home</li></ul>
Garden vegetables	<ul style="list-style-type: none"><li>• Practice safe gardening</li></ul>

Summary	
Total exposure	<ul style="list-style-type: none"><li>• Follow the above recommendations</li><li>• Test children for lead</li><li>• Contact your doctor or ADHS/ATSDR for additional concerns</li></ul>

# IRON KING COLLABORATION - WHAT ELSE HAVE WE DONE?

- Community outreach to address drinking water quality concerns
- Communication even when we are not planning a joint activity



# COMMON GOAL: SERVE COMMUNITY

## FUNDAMENTAL CHALLENGE:

- Integrating individual purviews and/or goals



# TRANSDISCIPLINARY COLLABORATION: DO THE BENEFITS OUTWEIGH THE CHALLENGES?





# TRANSDISCIPLINARY COLLABORATION: COMMUNITIES ARE BETTER SERVED

## Challenges:

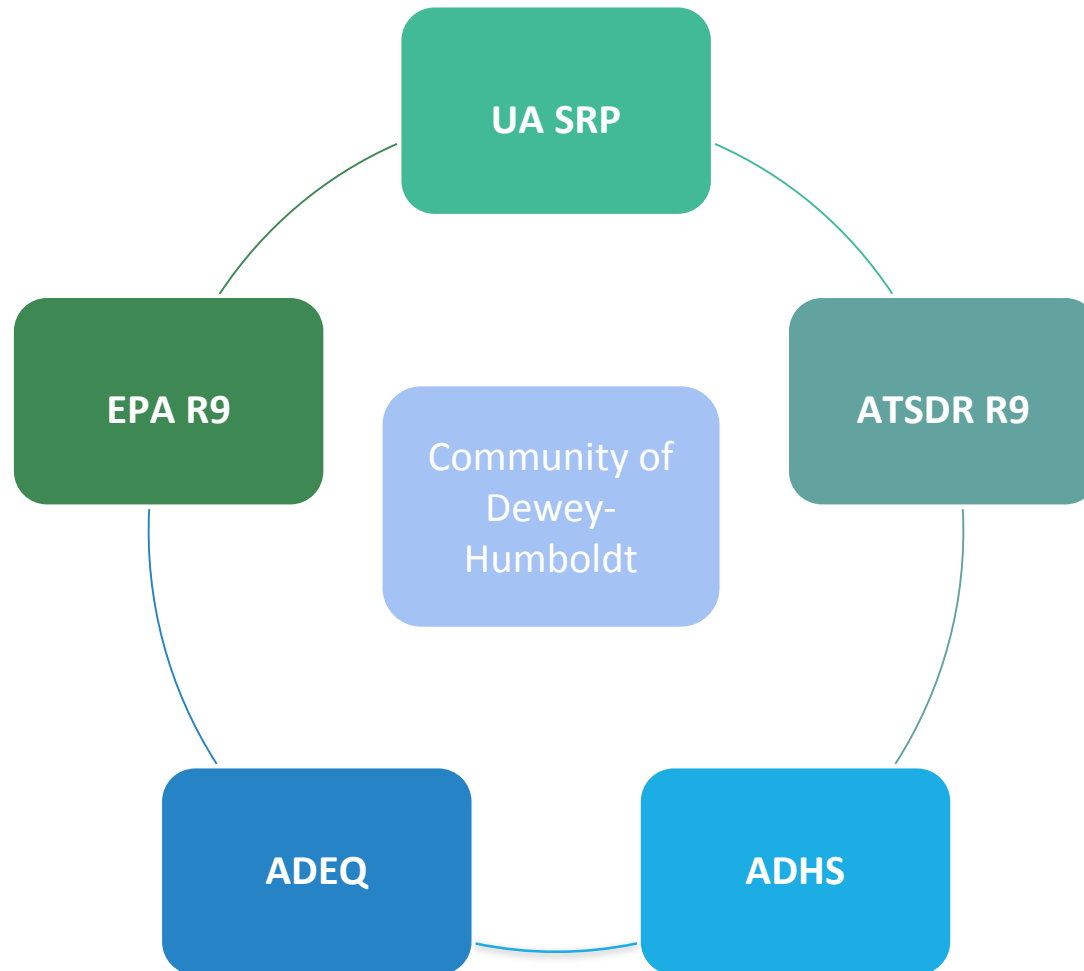
- Not a silver bullet
- Make all information available
- Community members as collaborators

## Benefits:

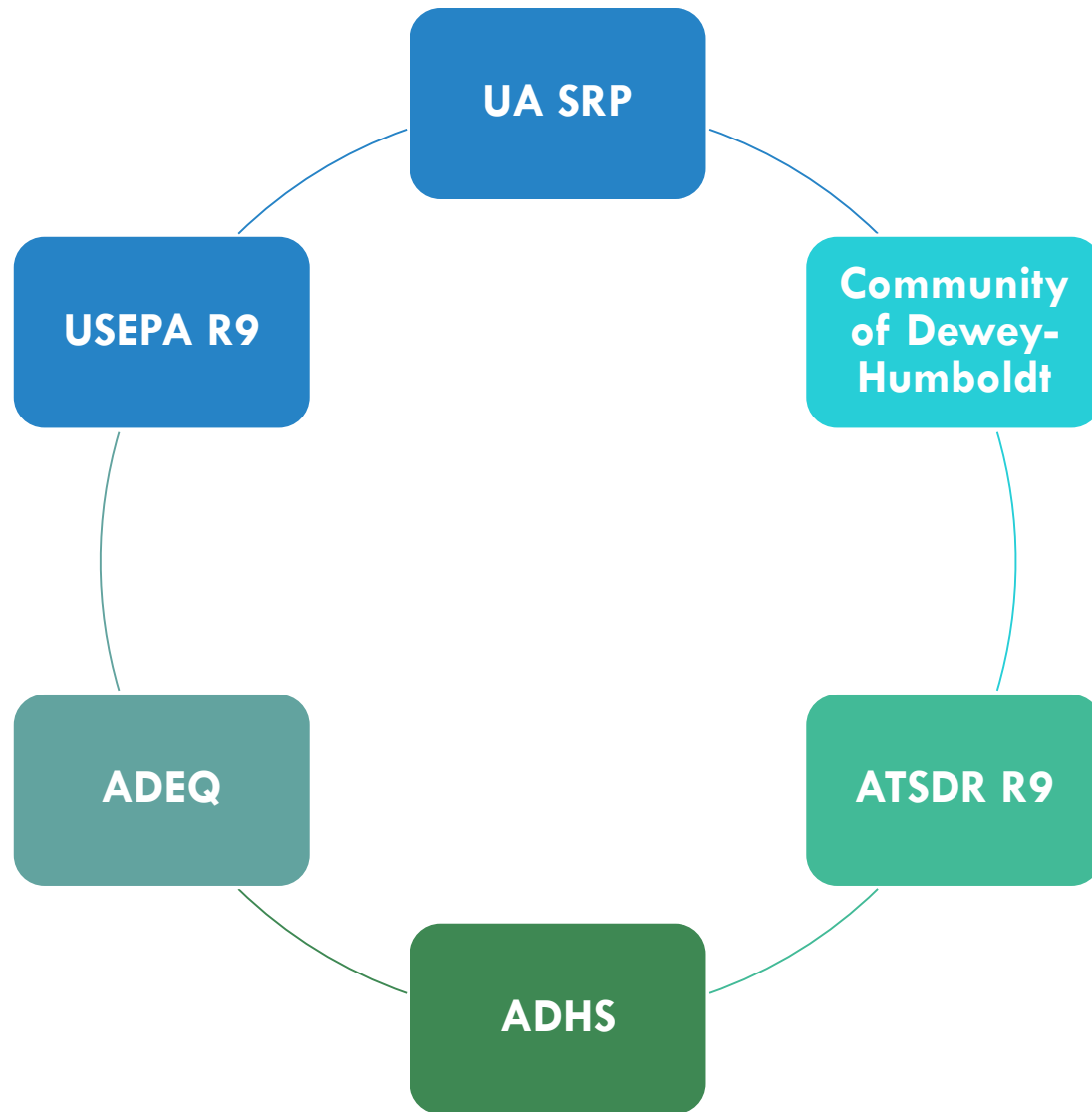
- Comprehensive response
- Consistent messaging
- Understanding who's who
- Questions/concerns relayed



# CURRENT COLLABORATION



# FUTURE COLLABORATION?



# TRANSDISCIPLINARY COLLABORATION: PROFESSIONAL RELATIONSHIPS ARE STRENGTHENED

## Challenges:

- Trust issues
- Takes time
- Where do we start?

## Benefits:

- Builds relationships
- Facilitates referrals
- Big picture continuity

# TRANSDISCIPLINARY COLLABORATION: INTER-ORG. COMMUNICATION IS IMPROVED

## Challenges:

- Getting on the same page
- Balanced sharing of information

## Benefits:

- Exchange info/feedback
- Review and discuss products/communications

# TRANSDISCIPLINARY COLLABORATION: PRACTICAL CONSIDERATIONS

- We are not the ones who live there
- Time and resources are limited for everyone
- Making initial connection can be tough
  - Being open to building relationships allows collaboration to happen
- Willing to work together although we may not see eye-to-eye
  - Requires trust



# DON'T BE AFRAID TO GET DIRTY!

Conflict provides an opportunity to learn and grow



TRANSDISCIPLINARY COLLABORATION:  
DO THE BENEFITS OUTWEIGH THE CHALLENGES?

**Yes!**



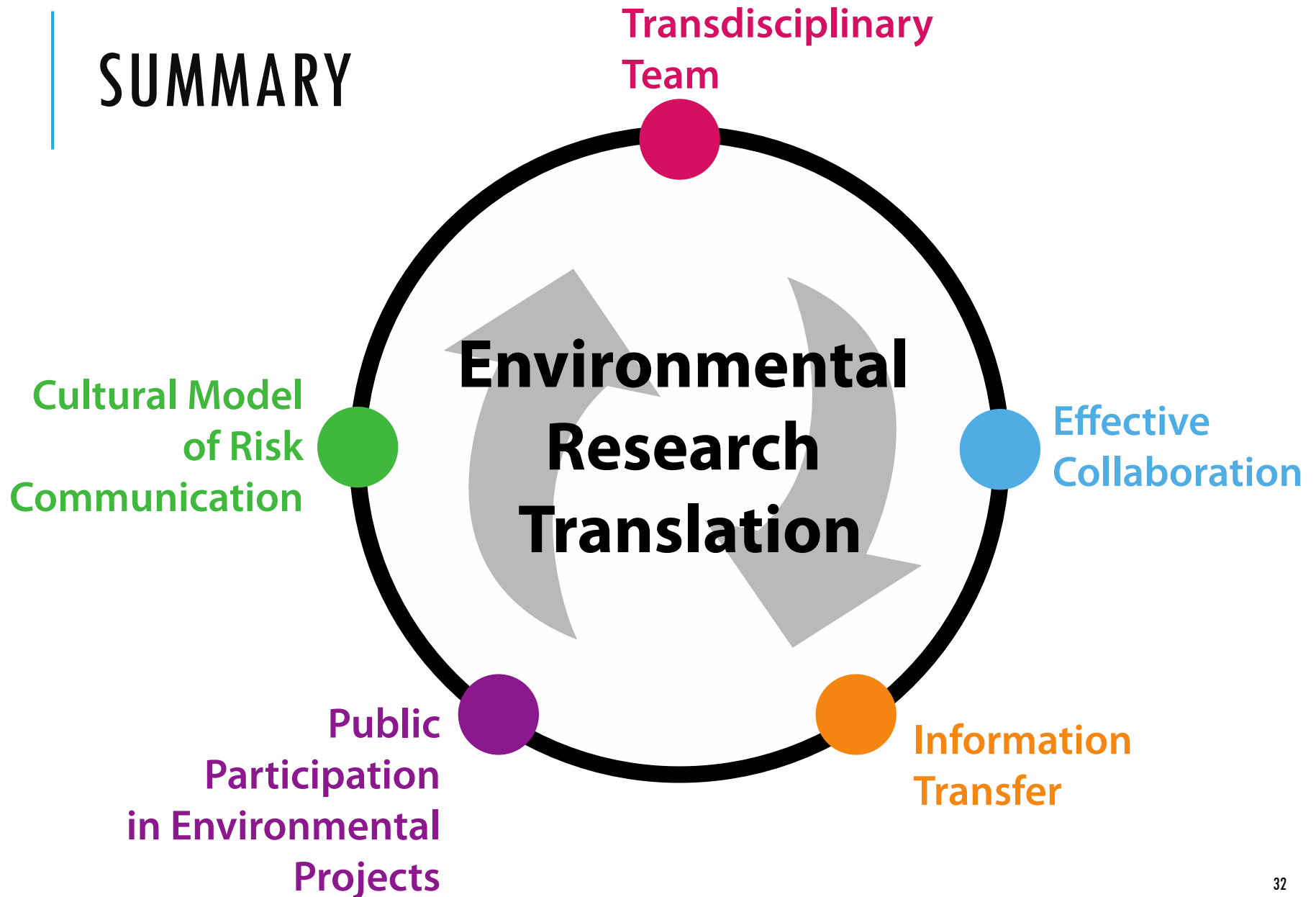
# TRANSDISCIPLINARY COLLABORATION: DO THE BENEFITS OUTWEIGH THE CHALLENGES?

- Greater coverage of issues
- Better leveraging of resources

Bottom line: Community is better served



# SUMMARY



# TIPS FOR SUCCESSFUL TRANSDISCIPLINARY COLLABORATION

- Put yourself in a community member's shoes
- Identify community concerns that
  - your organization is unable to address alone and/or
  - are being addressed by multiple groups
- Build transdisciplinary team
- Communicate regularly
- Organize projects to address concerns
  - Especially early in your collaboration

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# WORLD CAFÉ



**Goal:** Allow a group of diverse people to interact in collective consideration of questions of mutual interest

## Process:

- Three small group discussions, ten minutes each
- Discussion leaders facilitate
- Count off to form groups → first discussion table
- Rotate to table of your choice for discussions 2 and 3
- Identify note taker for each discussion

# WORLD CAFÉ

## Ground rules:

- Open, free form, respectful discussion
- Raise hand if you are having difficulty being heard
- Problem with the discussion? Slide one hand palm down toward center of table



# WORLD CAFÉ: DISCUSSION 1

- What are your/your organization's goals at the site/community (big picture and specific to community involvement)?
- Who do you work with currently?



# WORLD CAFÉ: DISCUSSION 2

- What resources, skills, relationships, and areas of expertise do you/your organization bring to the table?
- Do you/your organization have any challenges meeting community needs/expectations? What are you missing?



# WORLD CAFÉ: DISCUSSION 3

- Could transdisciplinary collaboration further your organization's goals at the site? How might it benefit the community?
- If so, what specific steps could you take to encourage more communication, coordination, and collaboration at your site/community?





# WORLD CAFÉ: REPORT BACK





# WRAP UP

- Define transdisciplinary collaboration
  - Provide example
- Explain benefits and challenges
- Explore collaboration opportunities in your work
- Identify steps you can take to practice transdisciplinary collaboration

Presentation

World Café

# CONTACTS US!

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