

Explore, Synthesize, and Repeat: Process Design for Effective Stakeholder Engagement in Water Management



Kelly Mott Lacroix, Ph.D.

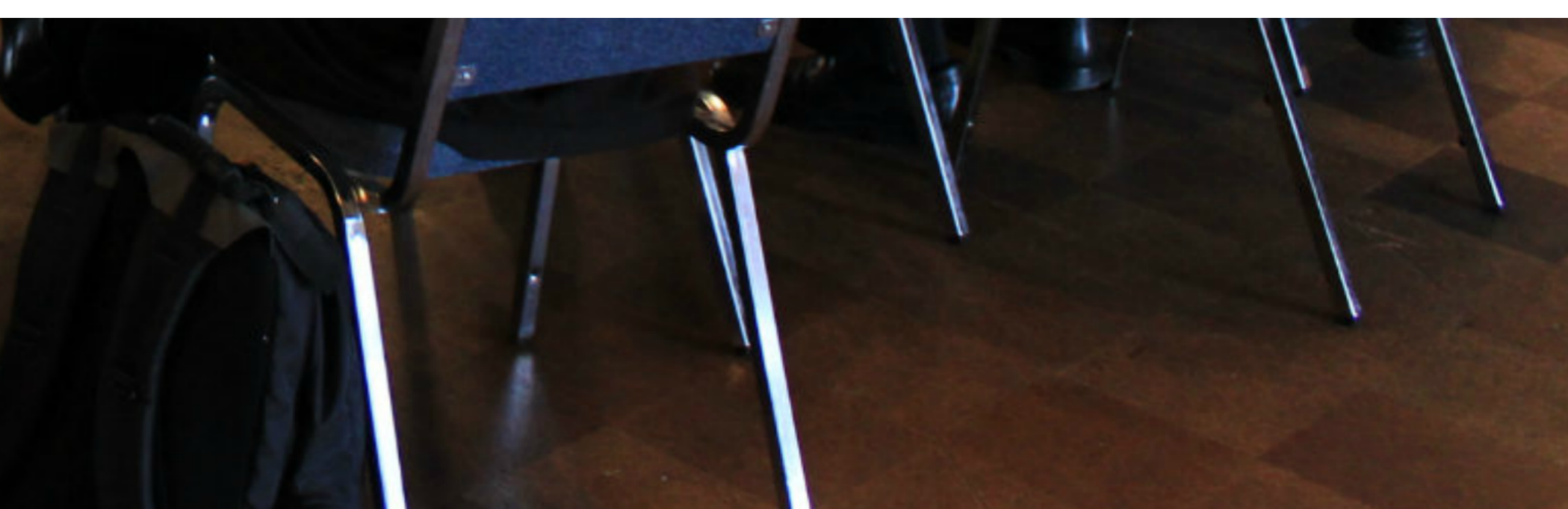


Explore, Synthesize, and Repeat: Process Design for Effective Stakeholder Engagement in Water Management



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Water RAPIDS
Water Research and Planning
Innovations for Dryland Systems



WRRC
WATER RESOURCES RESEARCH CENTER



COLLEGE OF
AGRICULTURE
& LIFE SCIENCES
COOPERATIVE EXTENSION

What is a Stakeholder?

- Person or group who has a "stake" in the outcome
- Different process design concerns for different stakeholders

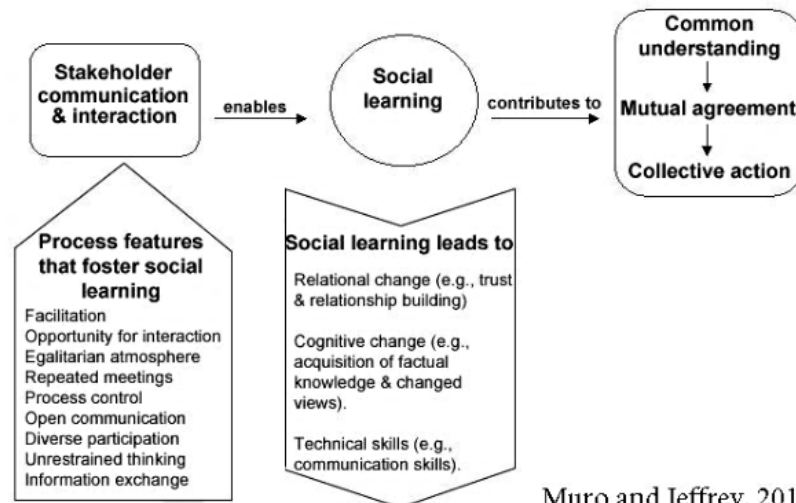
Public

Expert

Why Engage?

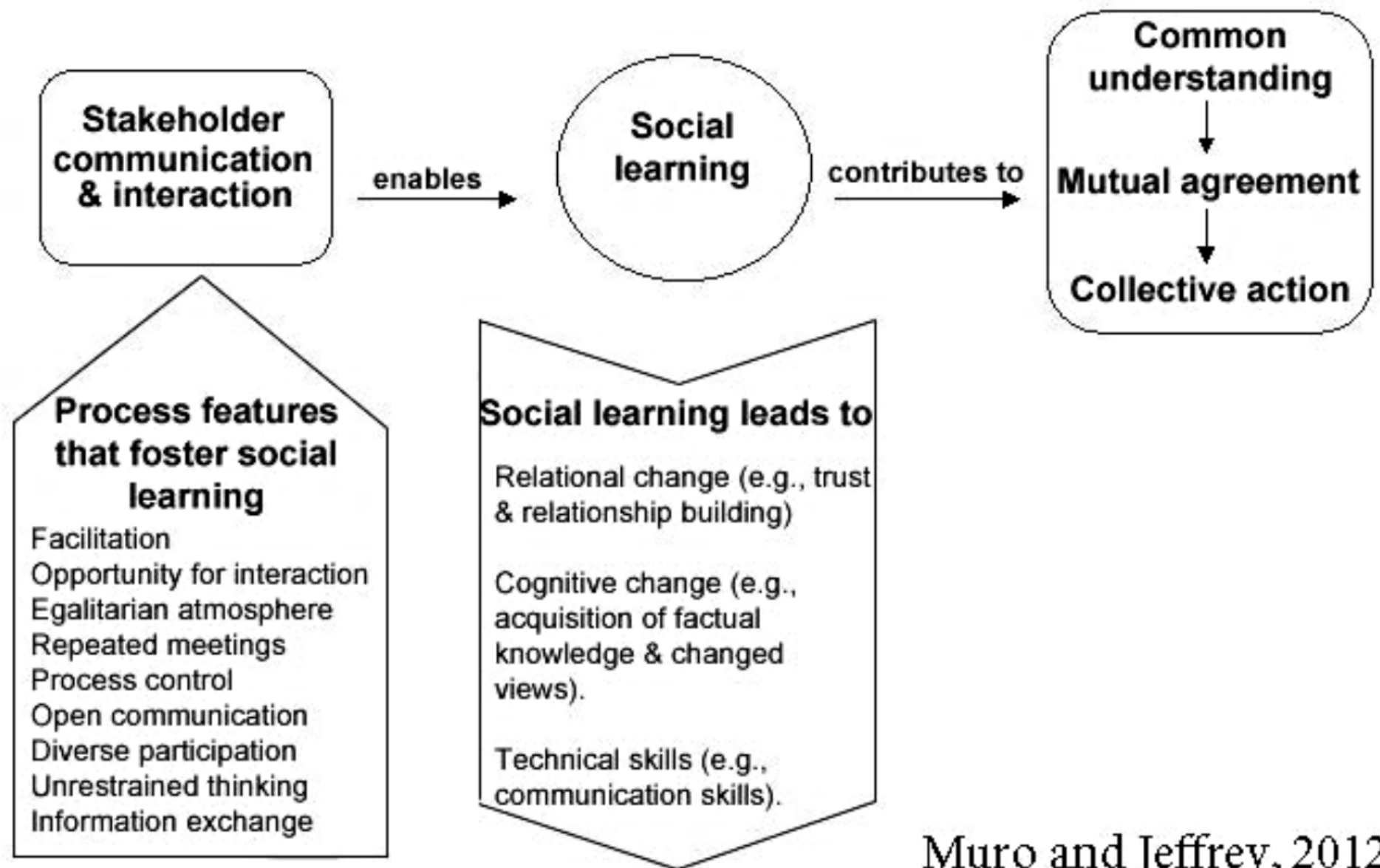
- Impact or influence on decisions
- Social license
- Social learning

Fig. 1. A compound model of social learning drawn from literature



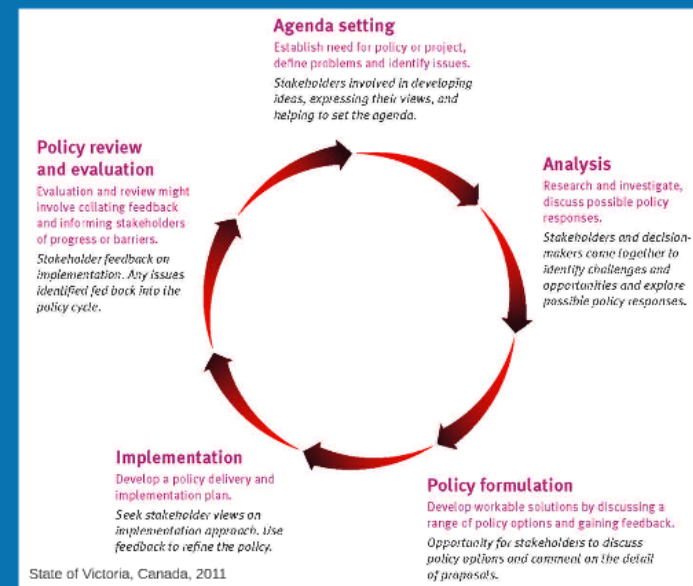
Muro and Jeffrey, 2012

Fig. 1. A compound model of social learning drawn from literature



What is Process Design?

- Steps in engagement process
- Many different variations with common themes
 - Set a goal
 - Understand stakeholders
 - Think about engagement aka Plan
 - Engage!
 - Implement
 - Evaluate



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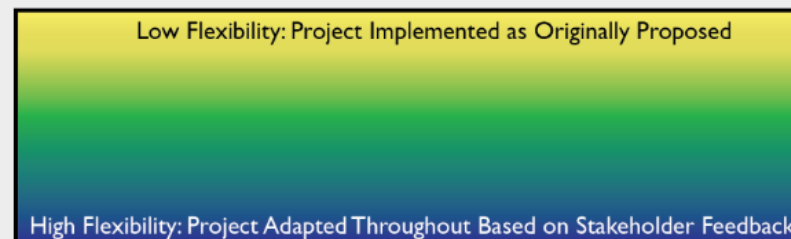
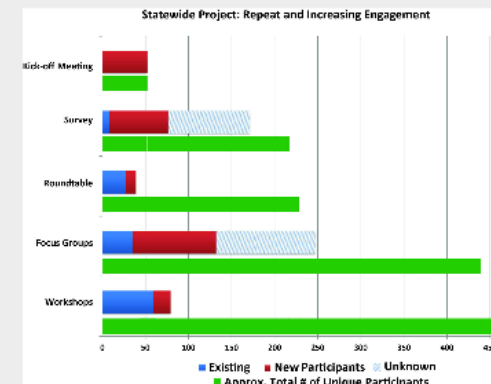
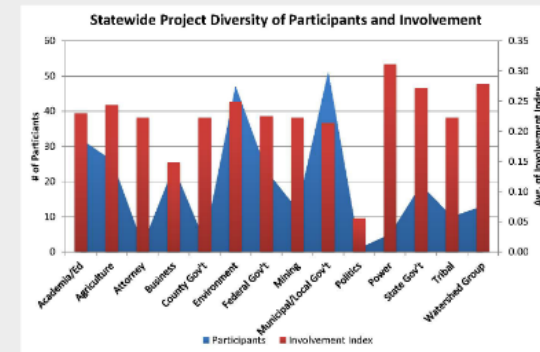
Methods - General Project Process

- Projects were not designed to study effective process design. Rather framework is result of lessons learned and drawing from engagement literature.



How can we measure effectiveness?

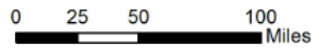
- **Inclusiveness** - How good is the process at including a broad array of interests?
- **Interactiveness** - Does the process use multiple avenues for engagement and are stakeholders engaging repeatedly?
- **Flexibility** - Does the process adapt to changing conditions and stakeholder concerns?





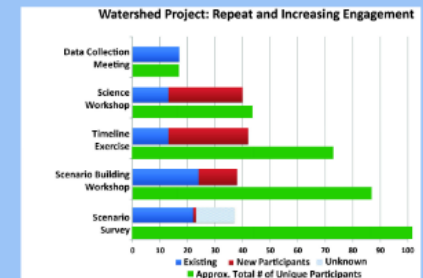
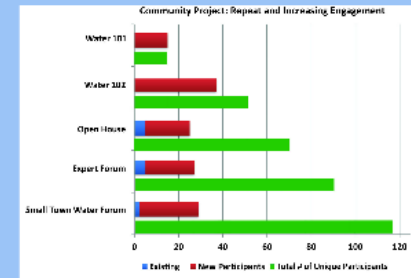
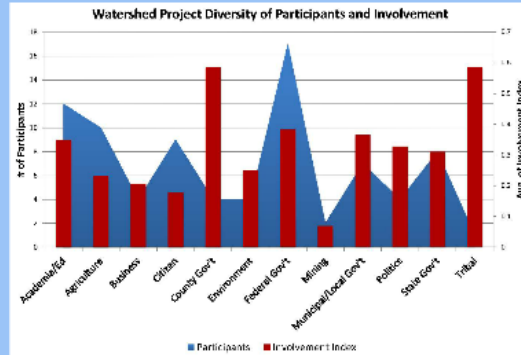
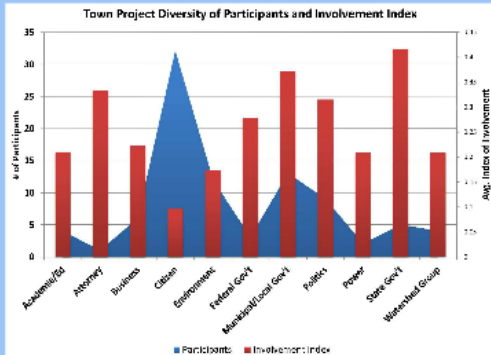
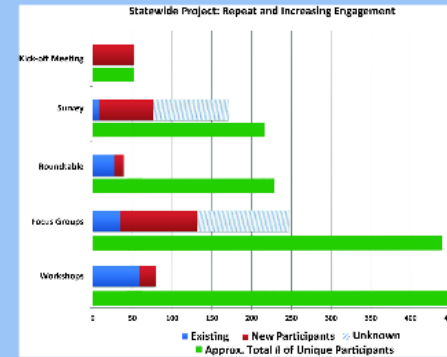
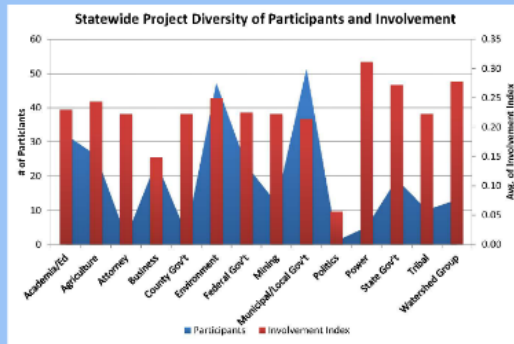
Legend

-  Project Locations
-  Clarkdale
-  Major Cities and Towns
-  COUNTIES
-  Major Rivers



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Agency (Federal)

Agency (State)

Agricultural

Environmental

Industrial

Non-Environmental NGOs

University Research

Tribal

University Research

Other (1):

University of
Maryland System
Office of
Sustainability
1000 University
Dr. College Park,
MD 20742

Connecting the Environment to Arizona Water Planning



- 3-year project
- Statewide scope
- Over 1,000 participants

- Roadmap for considering water for the environment in water planning and management



Gila River Participatory Watershed Assessment

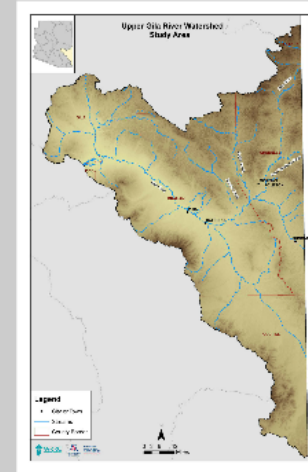
- 2-year project
- Southeastern Arizona - ~15,000 sq. mile watershed
- Rural - Population 45,000
- 100 participants

• Baseline assessment of watershed resources

• Scenario planning for the future of the watershed



Gila River Participatory Watershed Assessment



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Town of Clarkdale Water Resources Management Program



- Town of 4,000 people
- Along Verde River in Central Arizona
- 115 participants

- Funding to create recommendations for water management program that protects the river and encourages economic vitality

Problem and Goal



Clarkdale provides a water resources management program that meets the needs of residents, businesses and our natural environment equitably in order to be a robust and resilient community.



How do we:

- provide reliable long-term water supplies for a resilient community.
- preserve the rural, agricultural life style, sustain and enhance the health of the Upper Gila Watershed
- in the face of uncertain physically and legally available water supplies.



Identify voluntary, stakeholder-driven options for addressing water needs of natural areas.

Steering Committee

EnWal Project	Gila Project	Clarkdale Project
State agency	State agencies	State agency
Municipal water utility	Municipal water utilities	Municipal water utility
Agriculture	Agriculture	Water resources engineer
Tribal	Tribal	Water resources specialist
Regional agency	Federal agencies	Water-energy nexus specialist
Cooperative Extension	Watershed partnership	Water attorney
Non-Governmental Organization	Communities	

Engagement Activities



- Water 101, Water 102, and Public Open House
- Expert Meeting and Small Town Water Forum



- Science Coordination Workshop and Shared History Timeline Exercise
- Scenario Planning Workshop



- Presentations (37 over 1 year)
- Survey
- Roundtable - Assess Barriers
- Focus Group - Understand Perspectives

Action Items



- 7 action items
- Long term: Take a regional approach to water management through formal cooperation with other jurisdictions.
- Short term: Develop a comprehensive water loss control program and identify optimal use of high quality reclaimed water.



- 1 action item
- Use scenarios to develop coordinated water and land management plans across jurisdictions for the watershed.

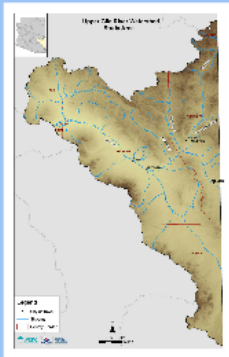


- 10 action items
- Long term: Set priorities for water for the environment through a localized process to promote cooperation and collaboration.
- Short term: Conduct a statewide survey to assess and rank public values for water and natural areas.

Problem and Goal

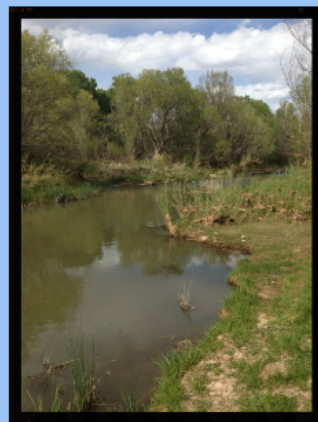


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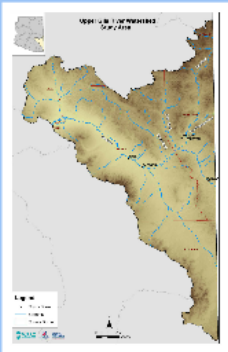
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Engage

Engagement Activities



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- *Science Coordination Workshop and Shared History Timeline Exercise*
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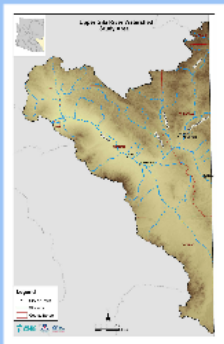


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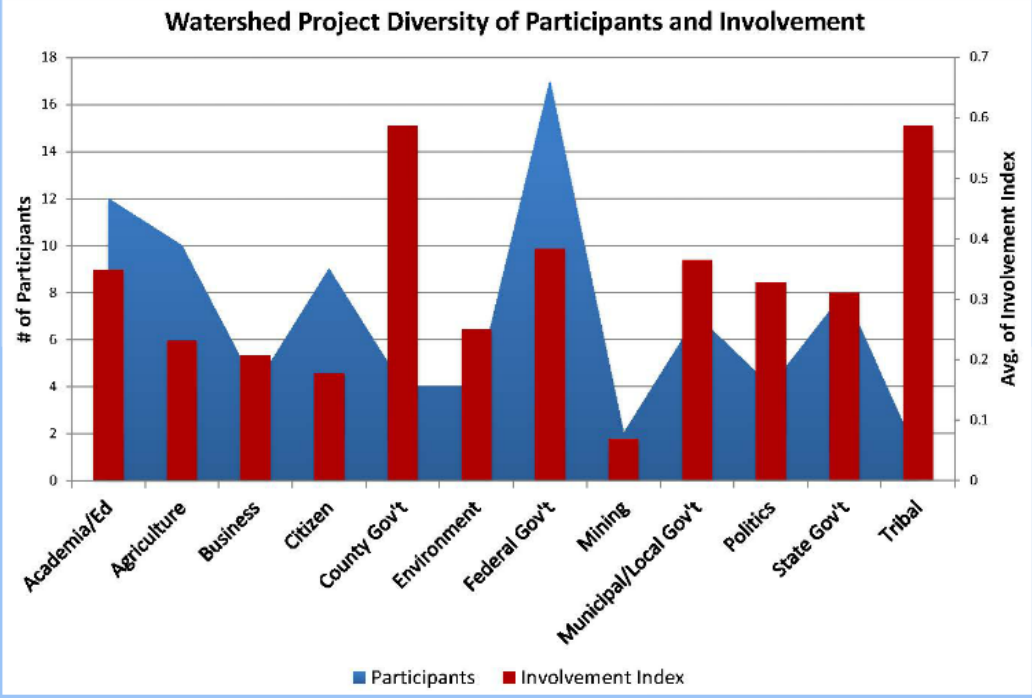
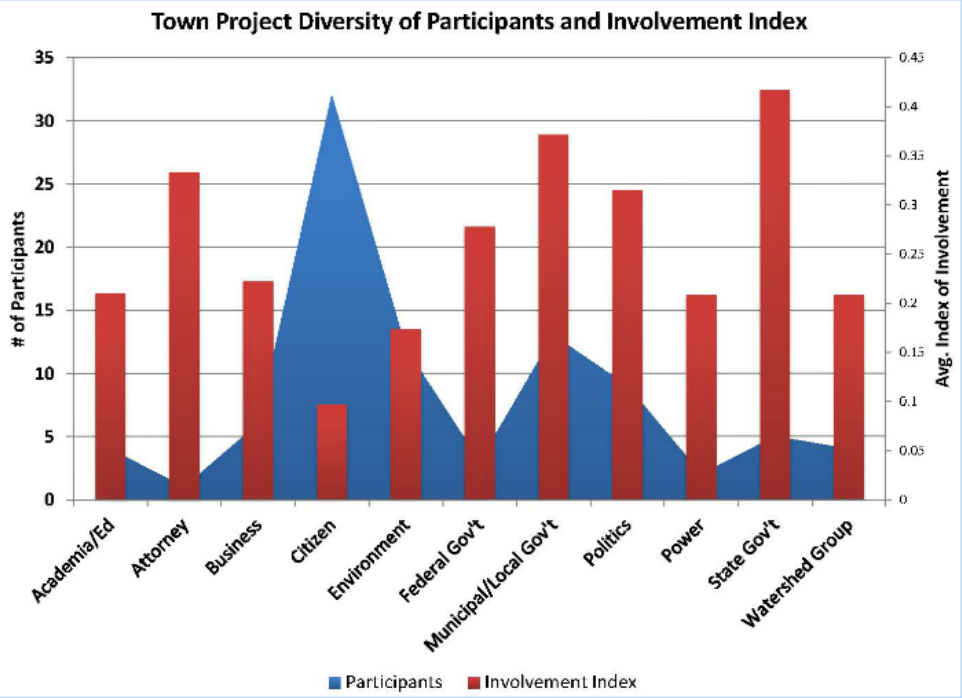
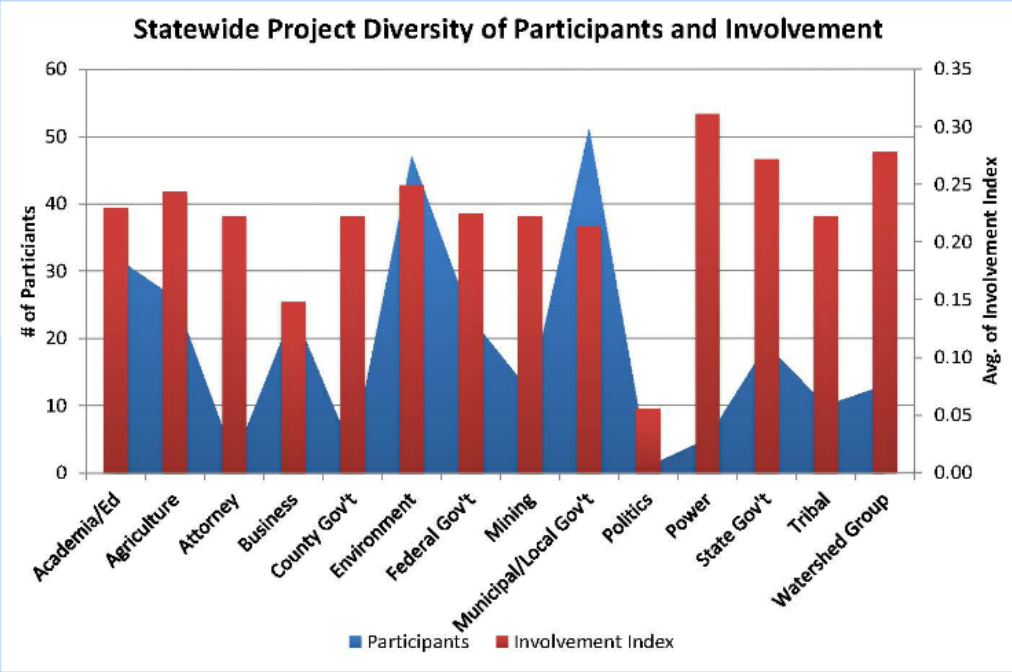
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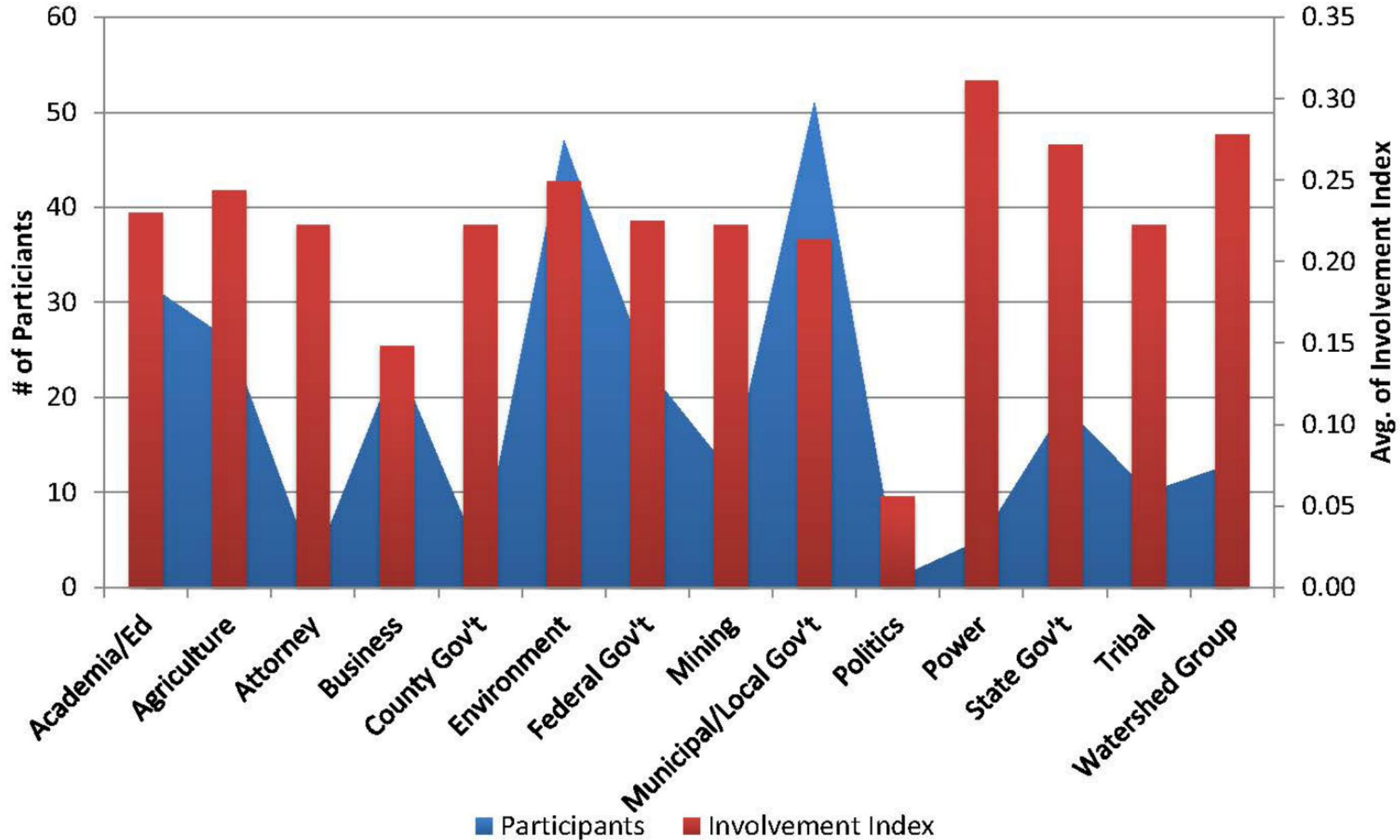
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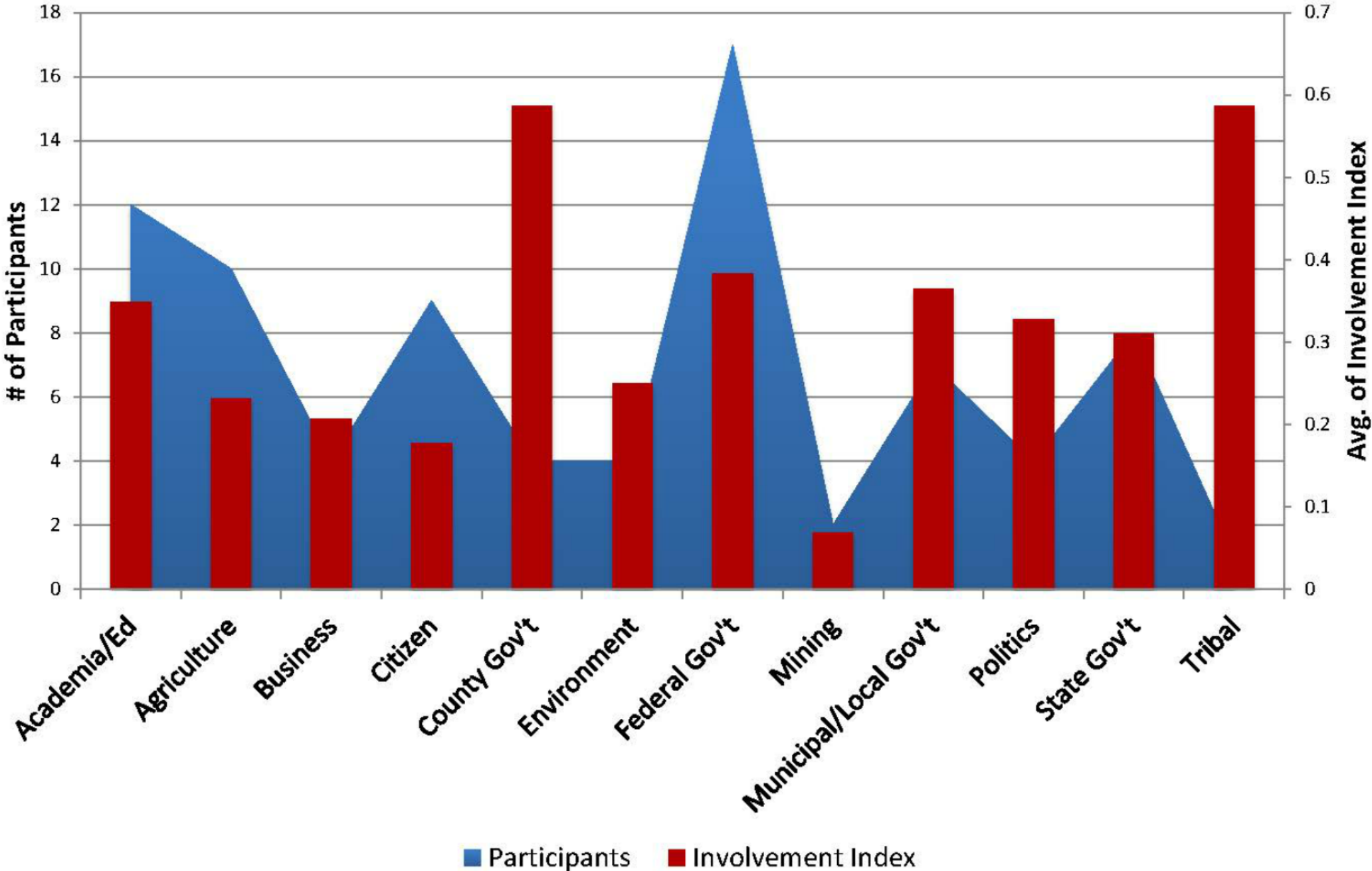
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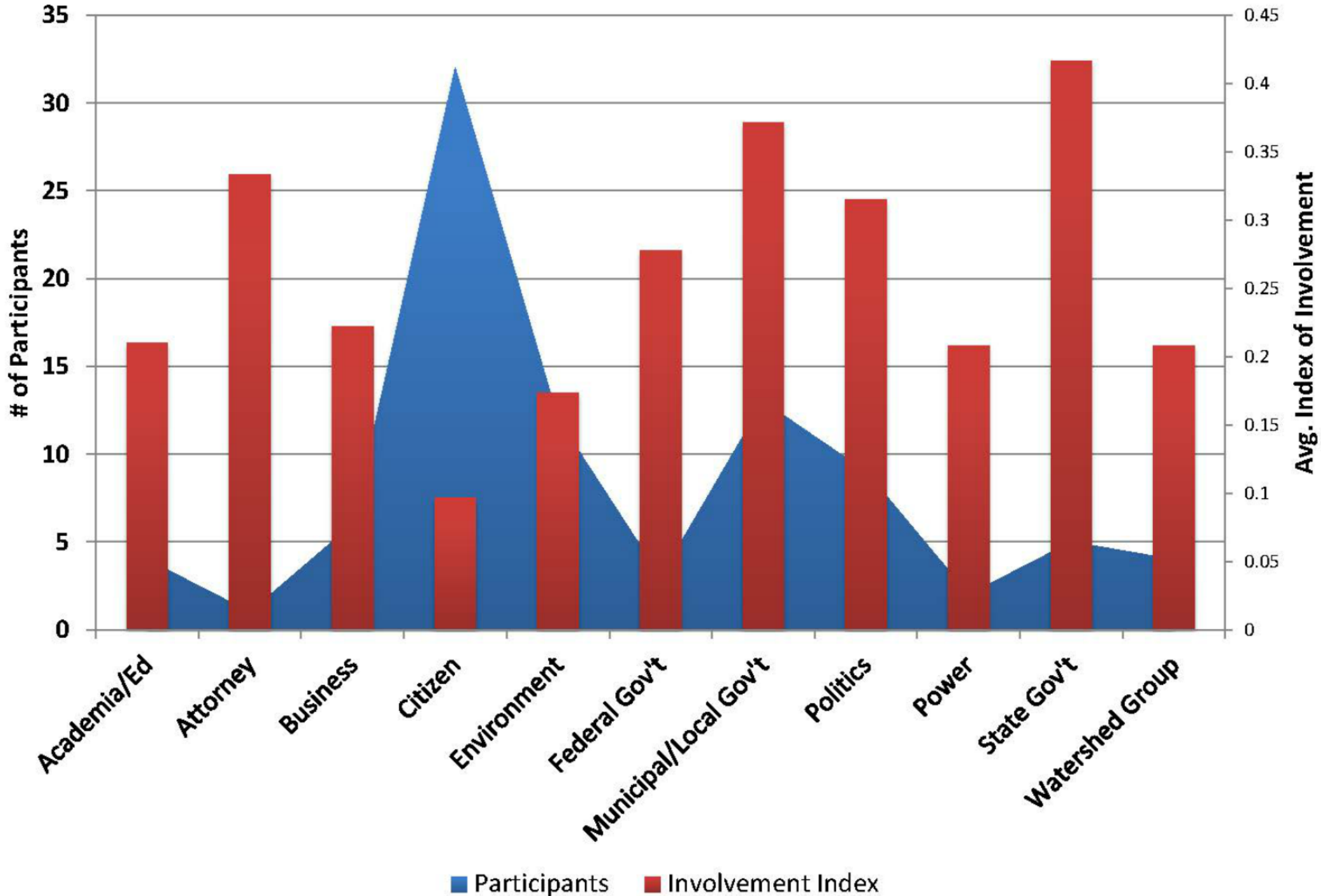
Statewide Project Diversity of Participants and Involvement

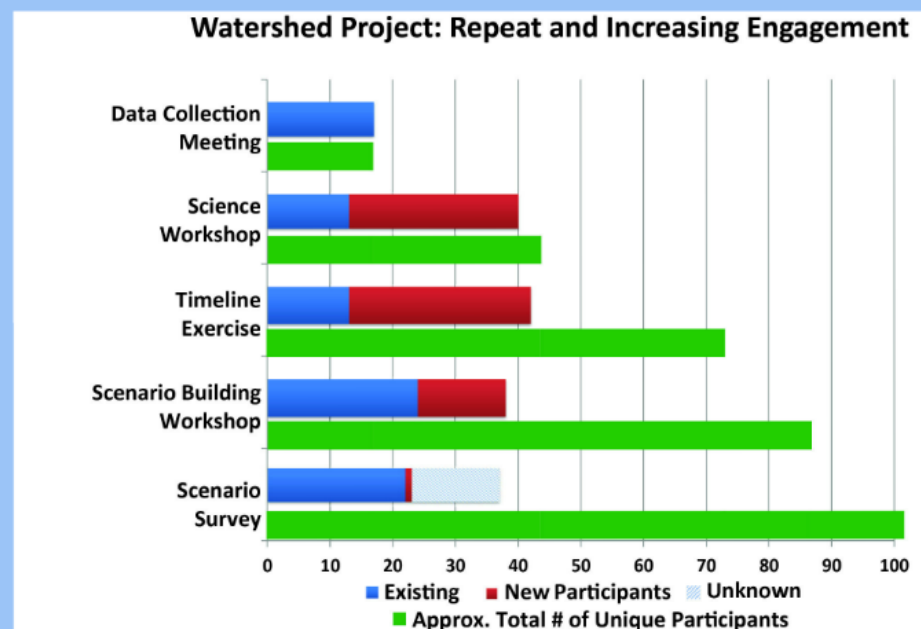
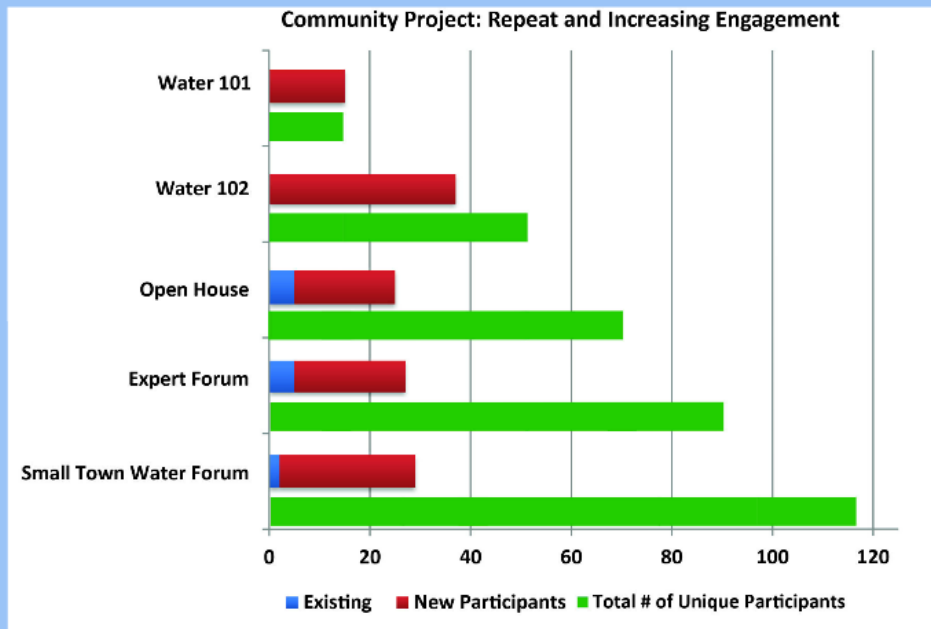
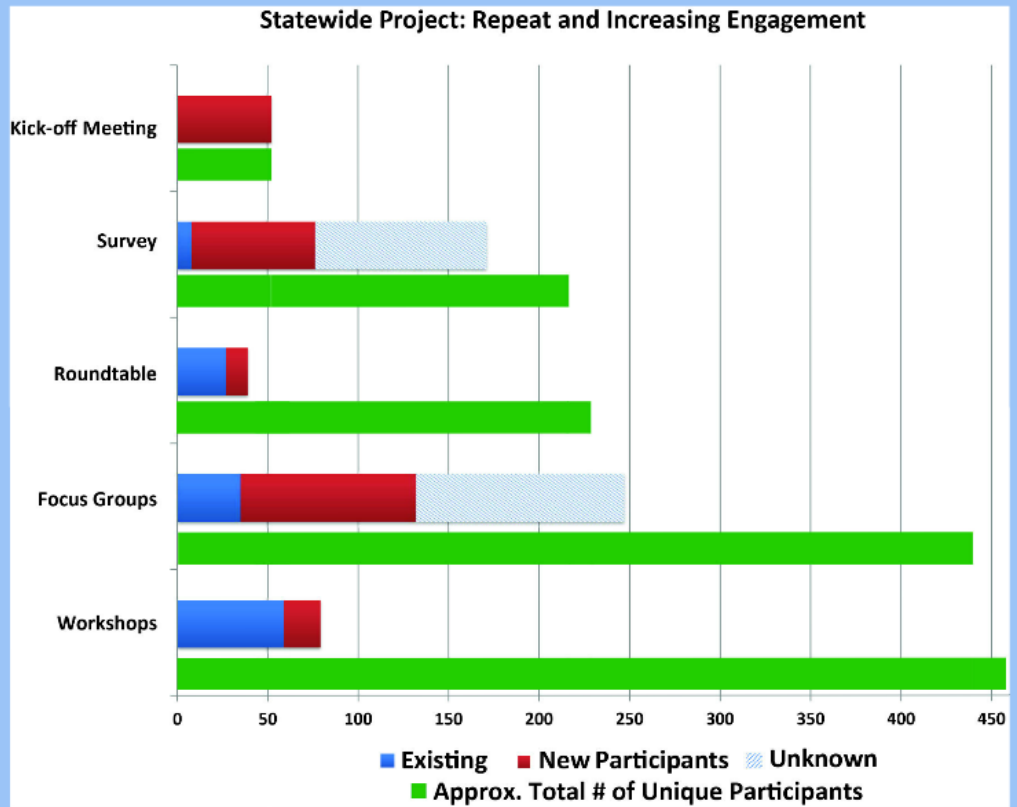


Watershed Project Diversity of Participants and Involvement

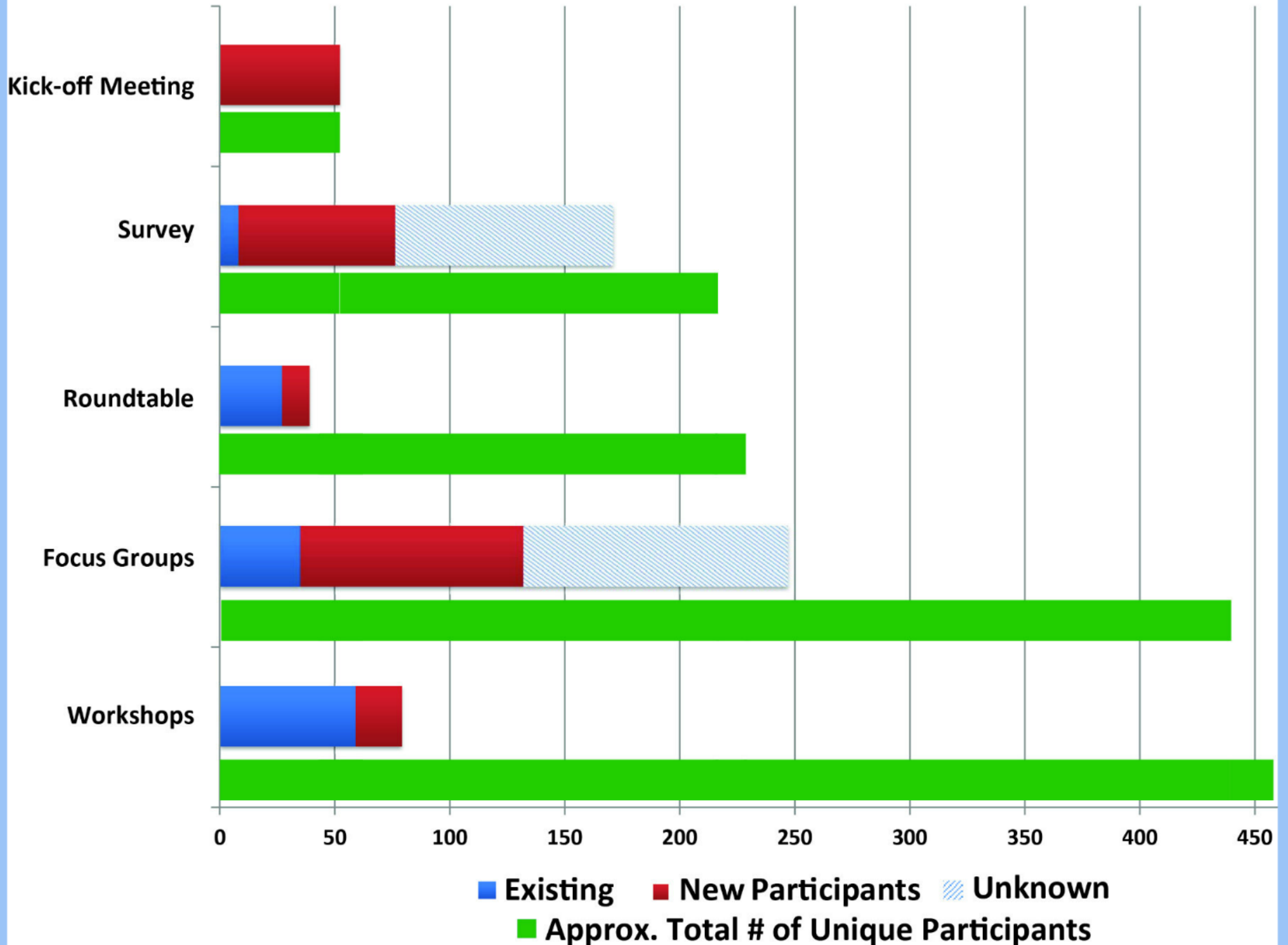


Town Project Diversity of Participants and Involvement Index

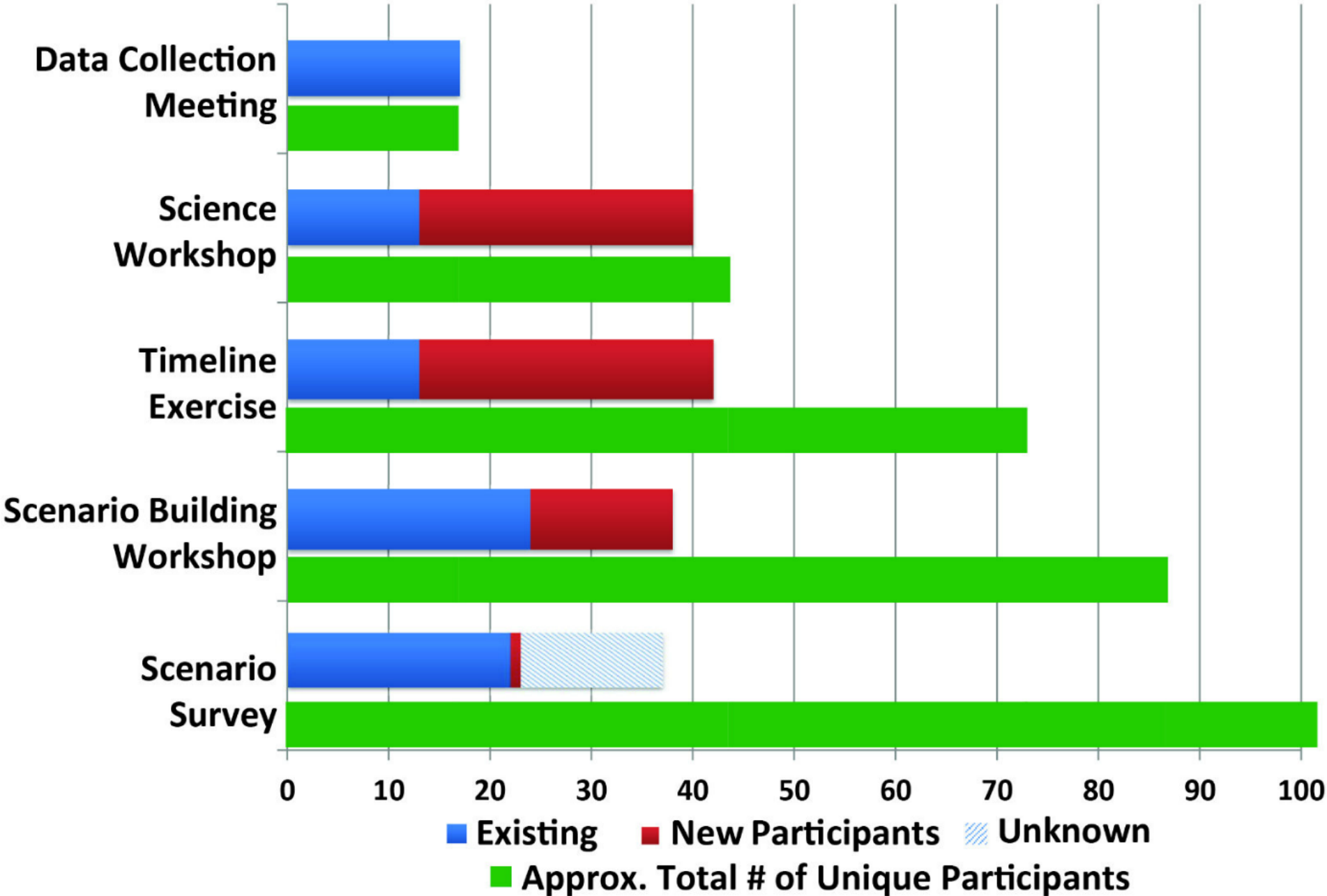




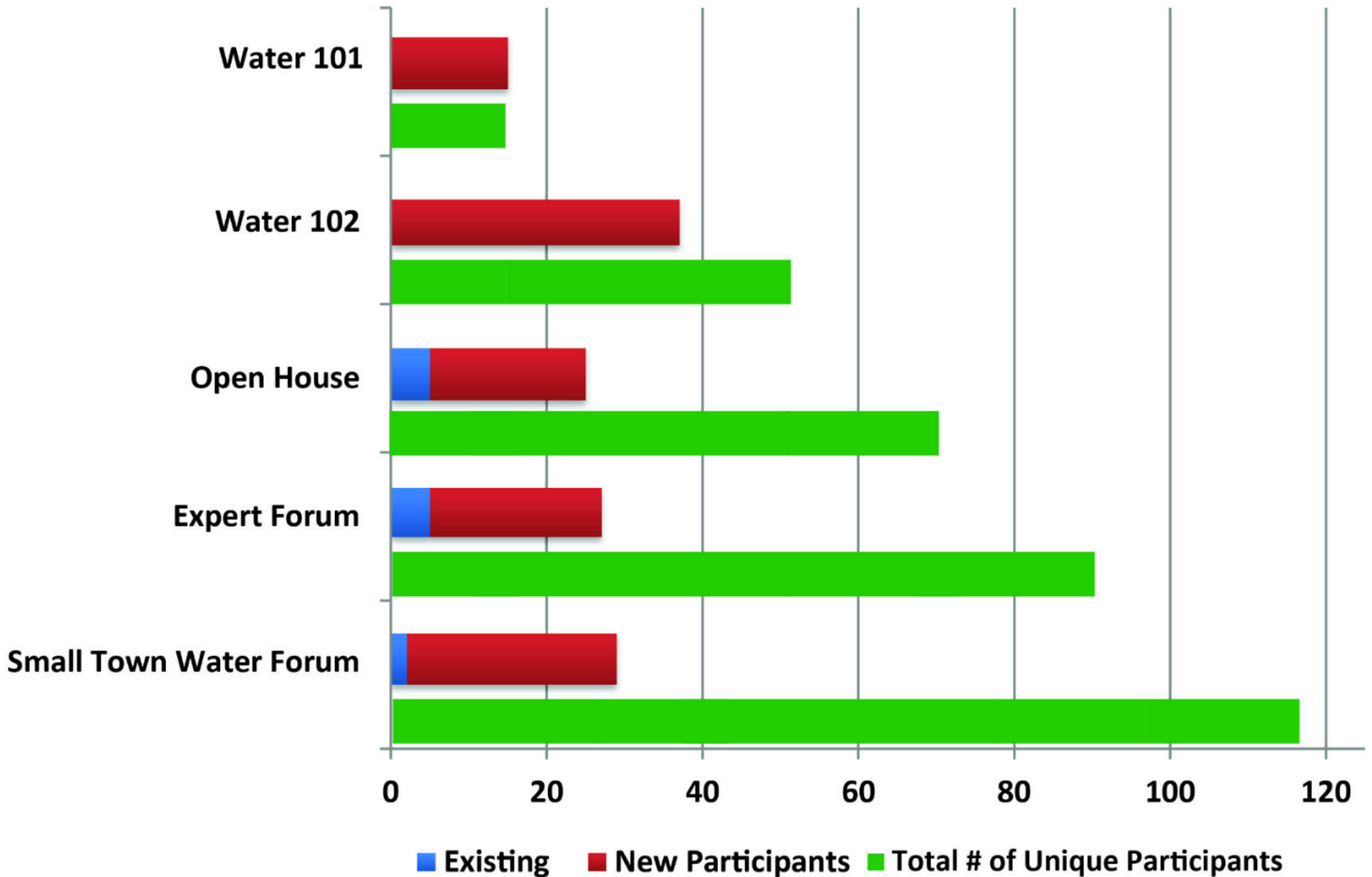
Statewide Project: Repeat and Increasing Engagement

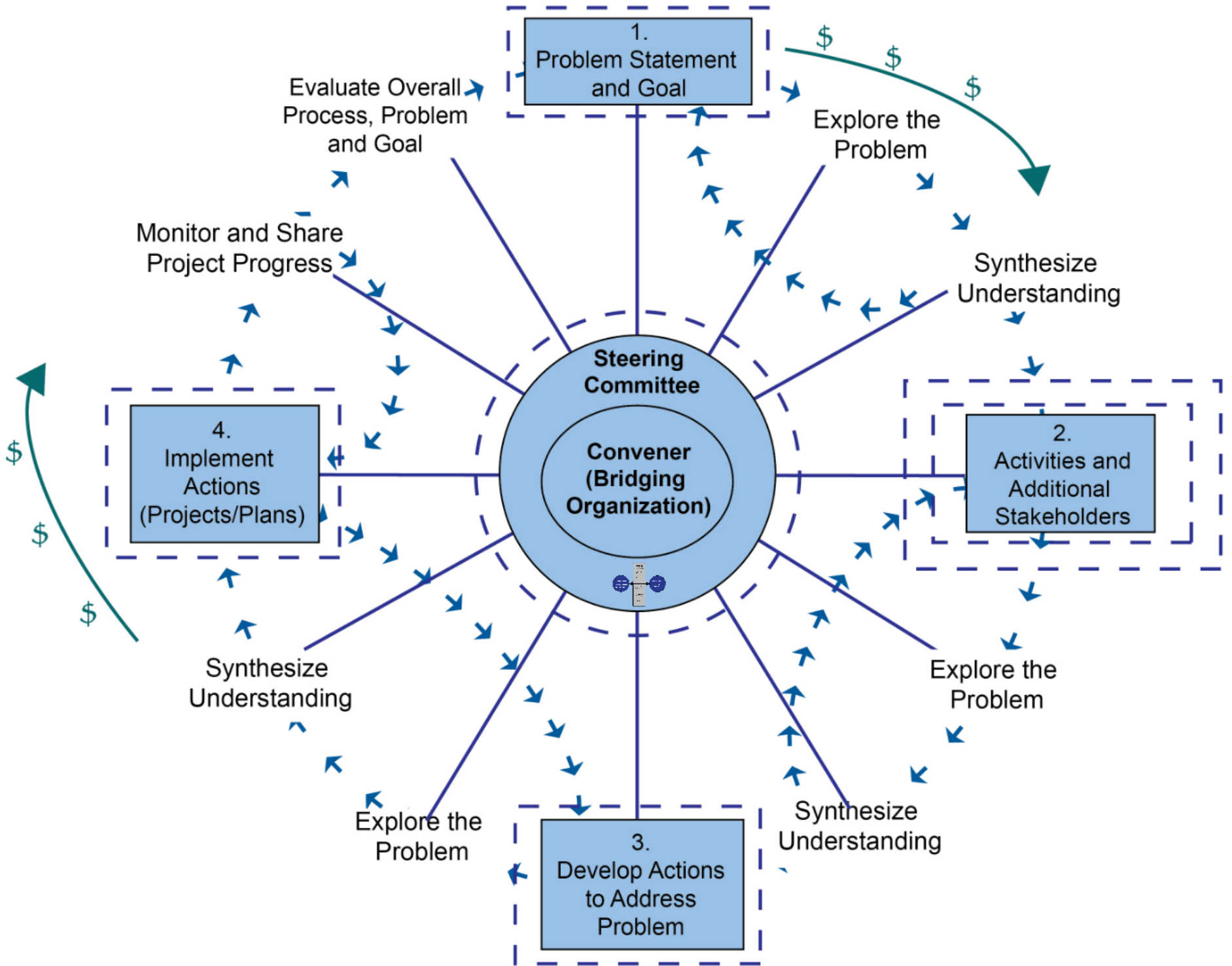


Watershed Project: Repeat and Increasing Engagement



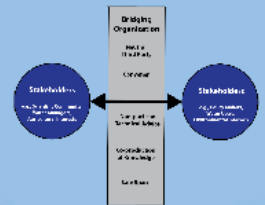
Community Project: Repeat and Increasing Engagement

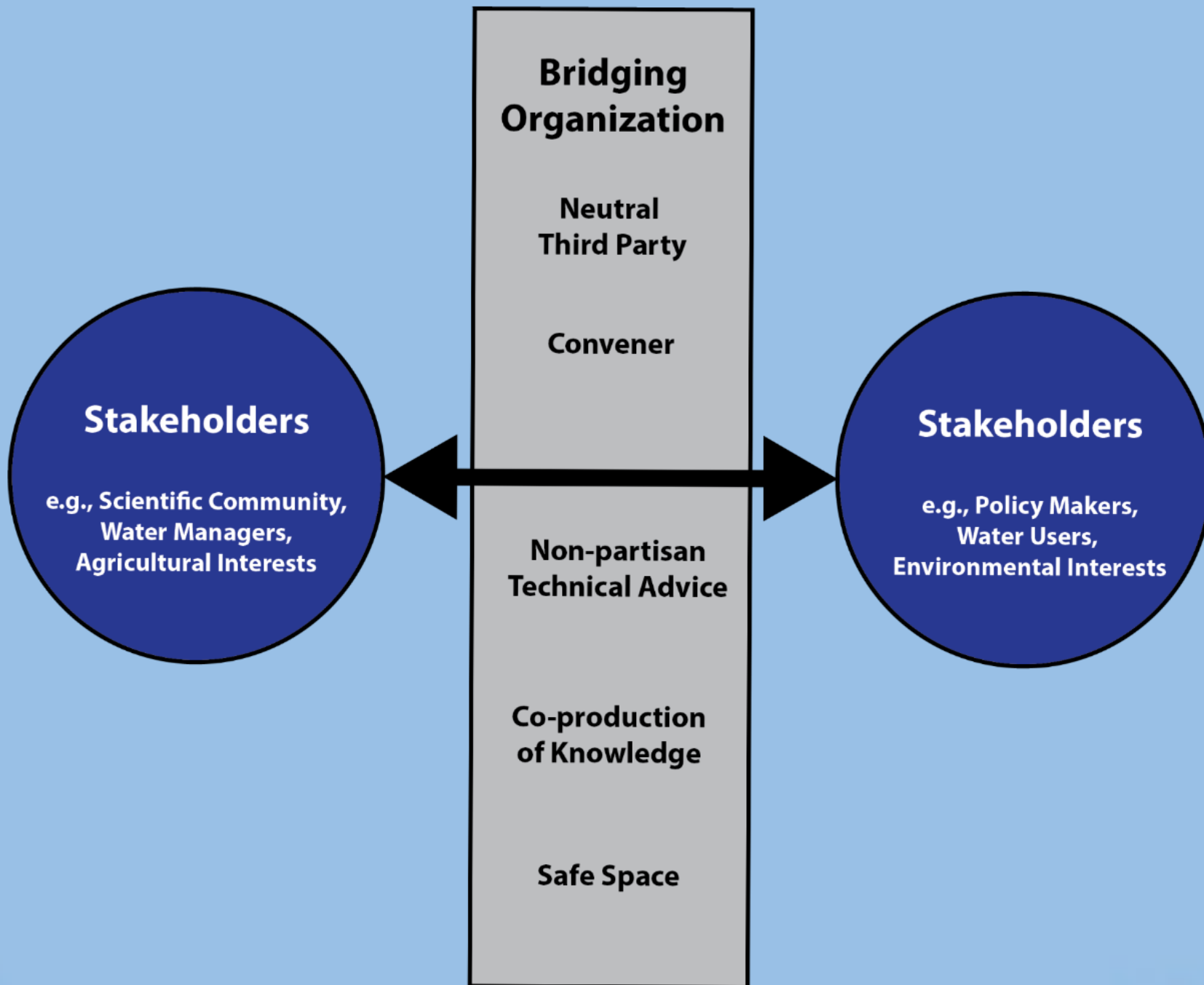




**Steering
Committee**

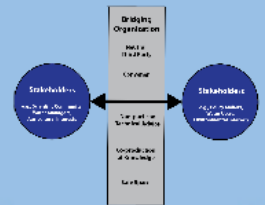
**Convener
(Bridging
Organization)**

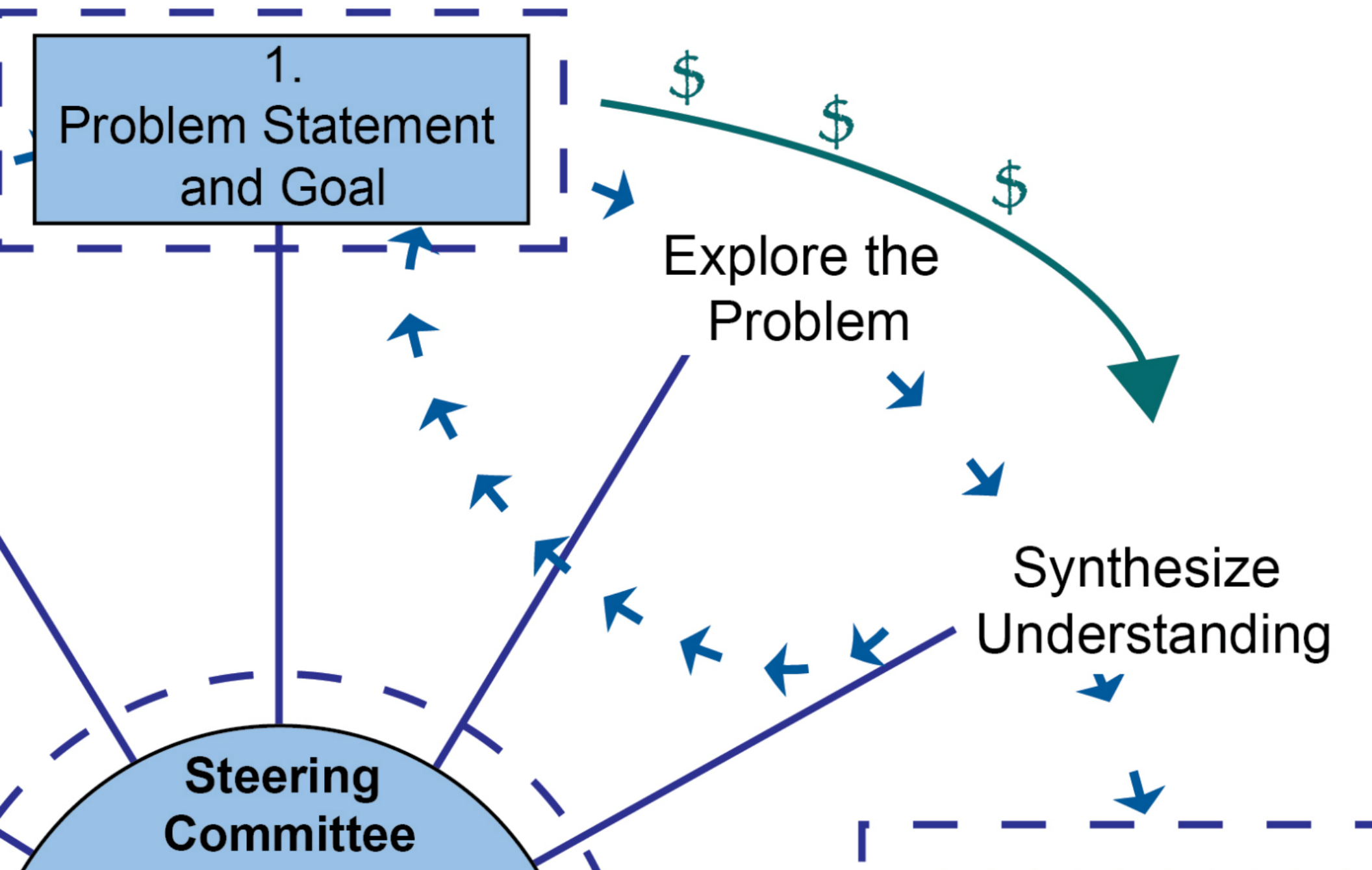


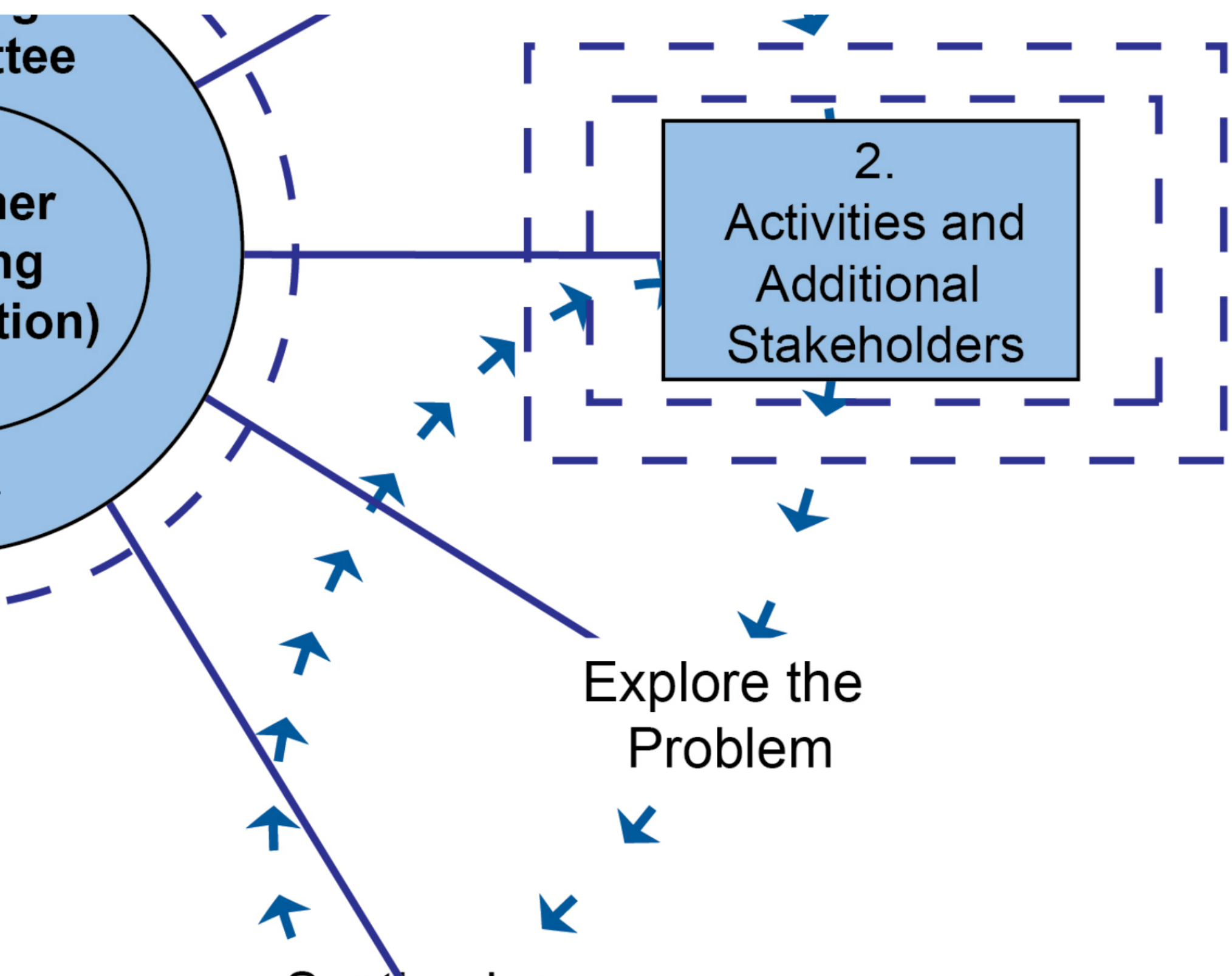


**Steering
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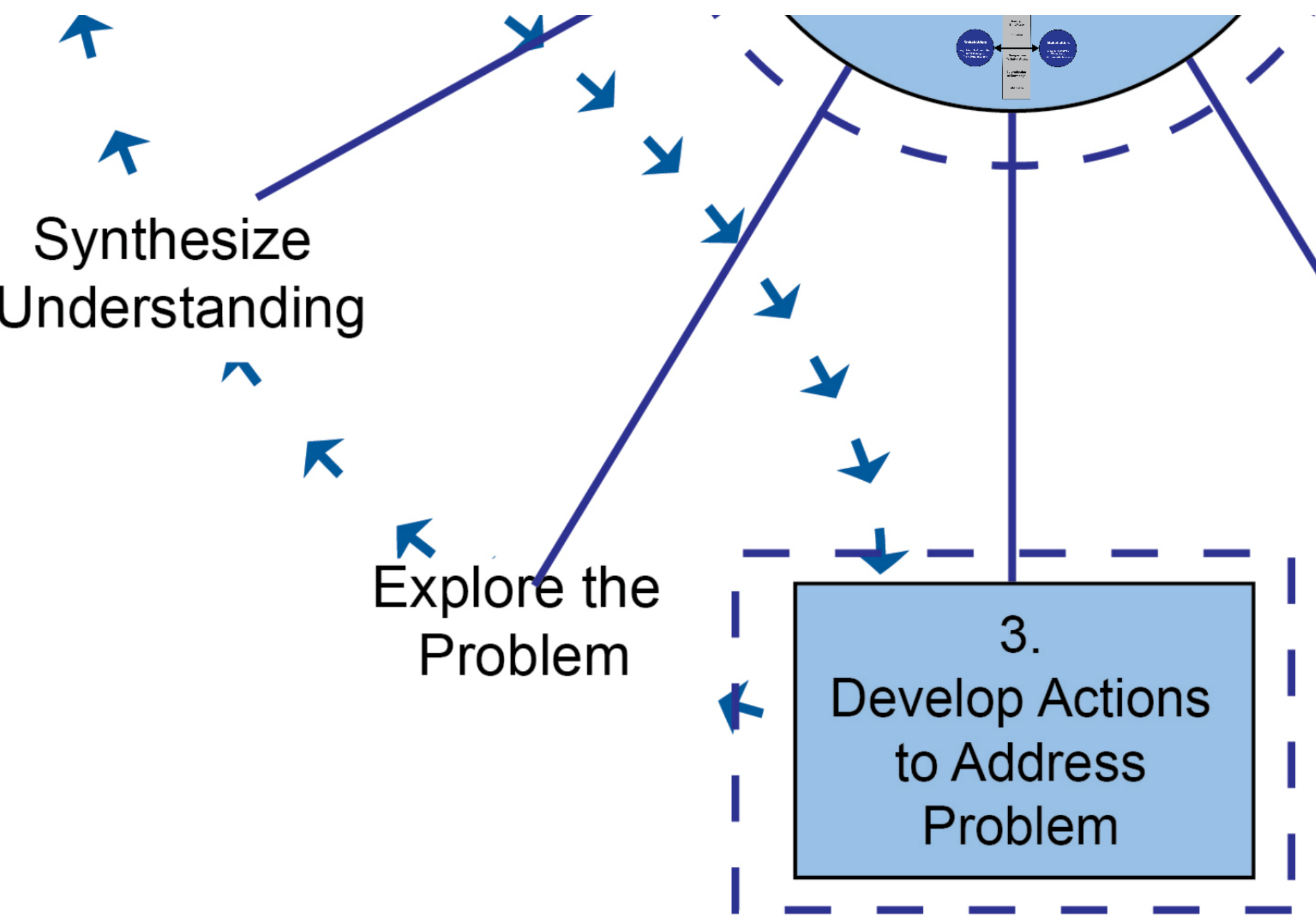


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2.
Activities and
Additional
Stakeholders

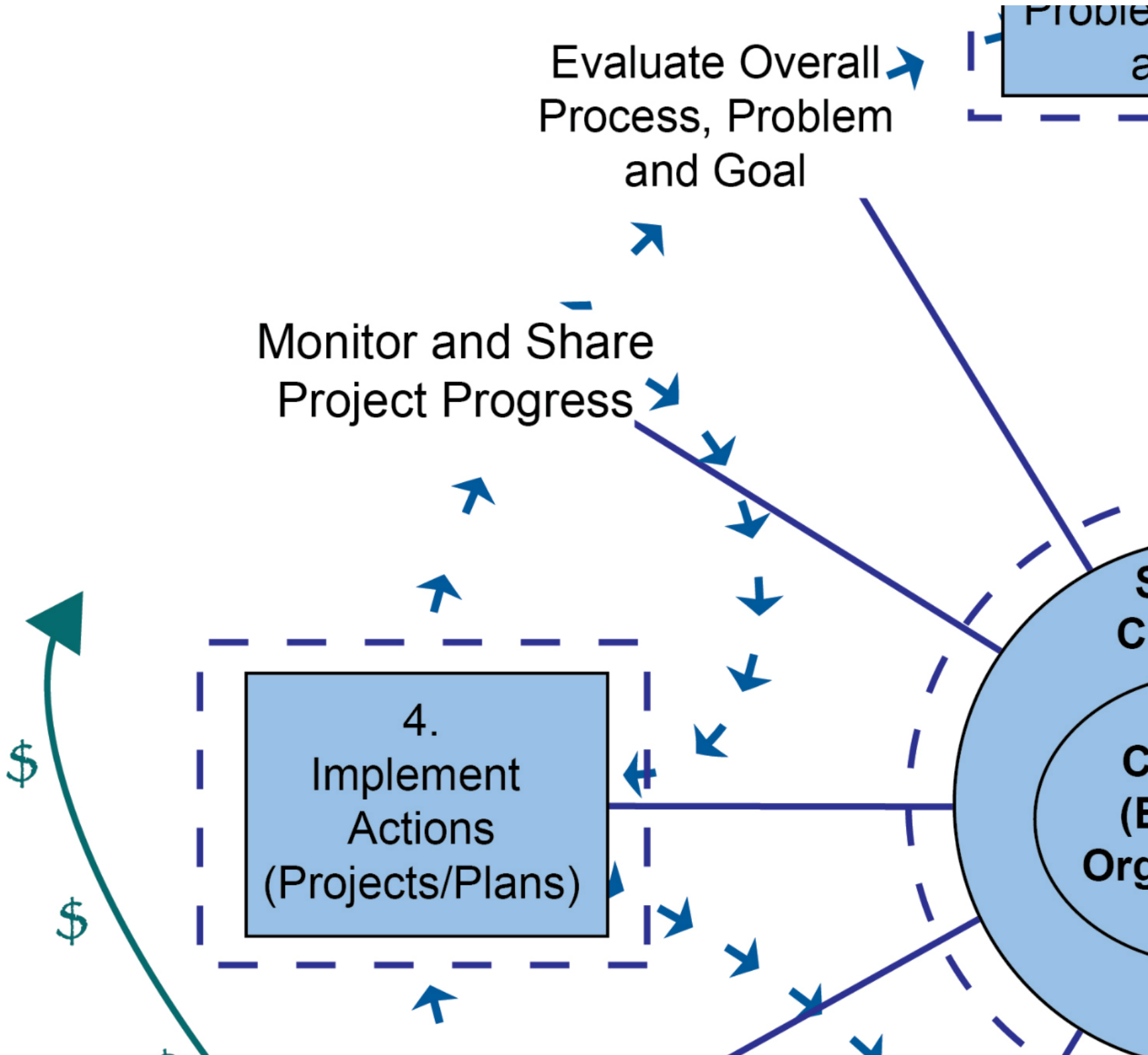
Explore the
Problem

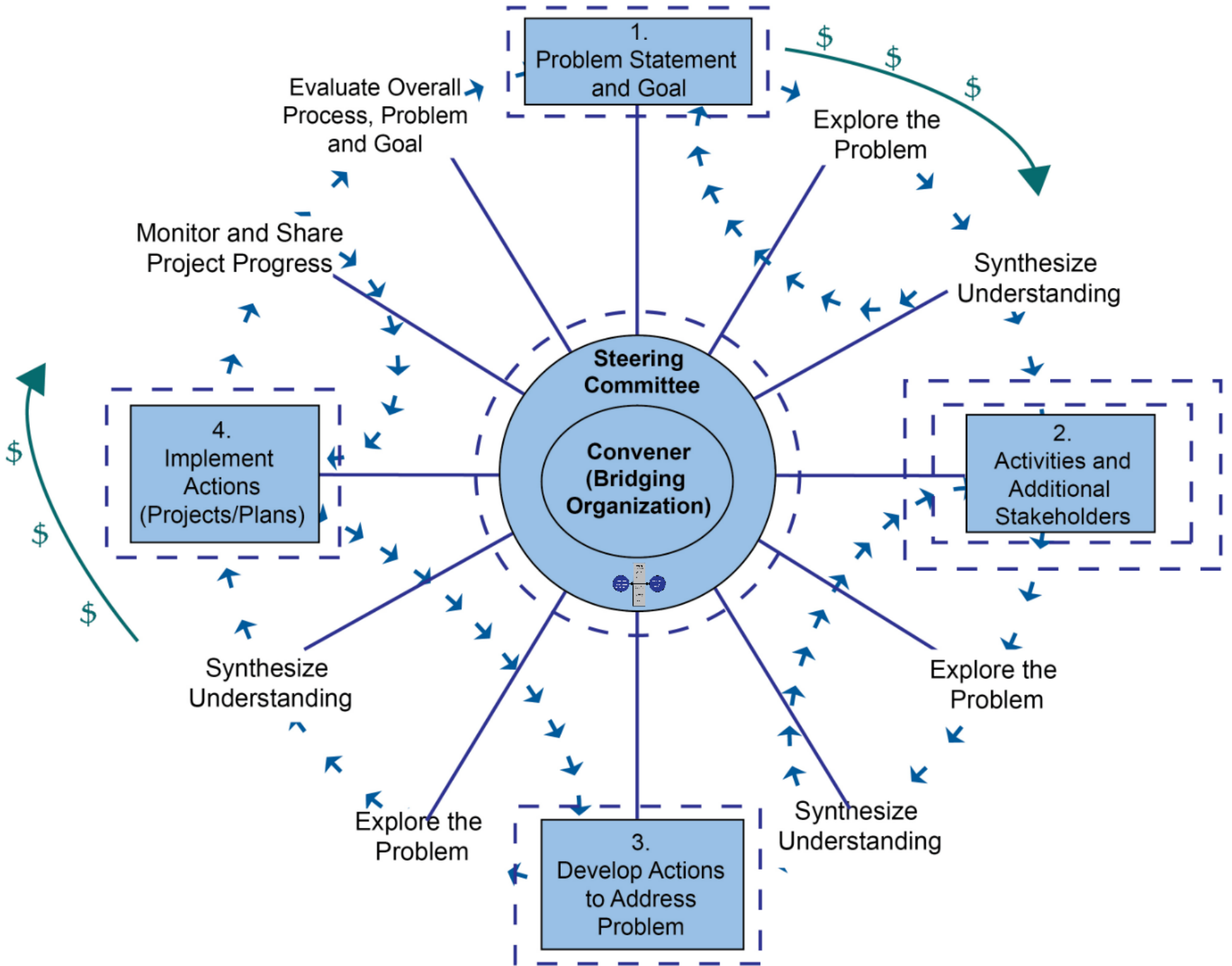


Synthesize
Understanding

Explore the
Problem

3.
Develop Actions
to Address
Problem





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