



CEP Senior Project

# **PARTICIPATORY MAPPING FOR COMMUNITY ENGAGEMENT AND EMPOWERMENT**

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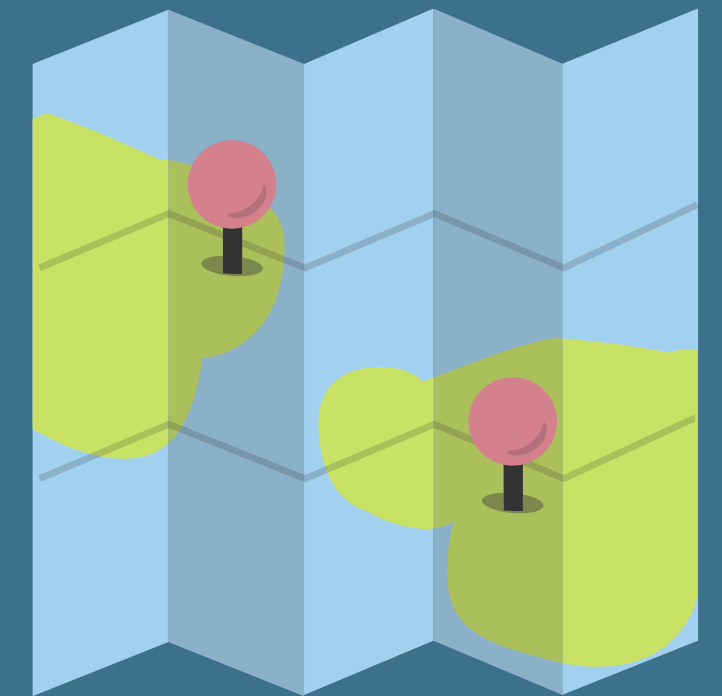
## WHAT IS PARTICIPATORY MAPPING?

"Shaped by principles of **equity**, participatory mapping has become an integral part of **community-based** participatory research enabling scholars to satisfy their research aims and objectives whilst **empowering** participants to build on community strengths to generate a shared awareness and understanding of **community assets**."

“

RESEARCH QUESTION

What is the best participatory mapping strategy for engaging and empowering communities?



# WHY STUDY PARTICIPATORY MAPPING?

## GOALS:

- To understand the different participatory mapping methods that are already in use
- To analyze and evaluate at least three different mapping methods
- To promote more equitable and empowering engagement methods
- Personal growth through developing project management and research skills



## PERSONAL SIGNIFICANCE

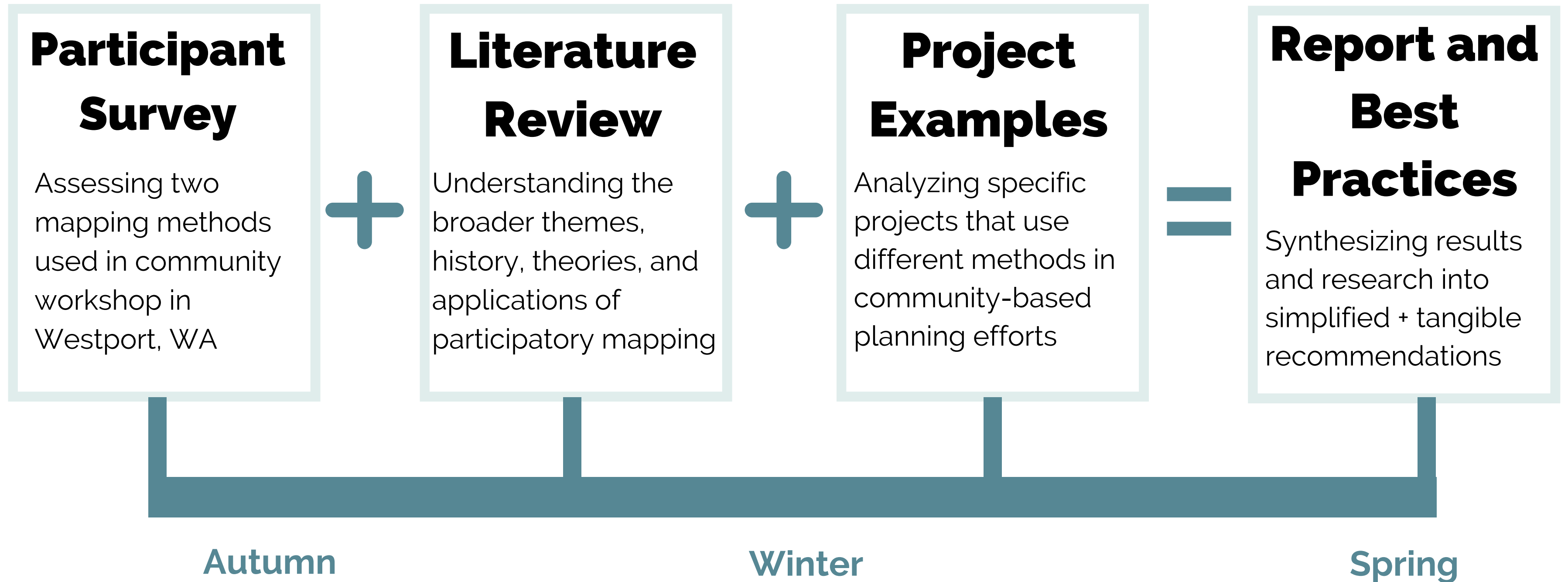
- Intersection between CEP major and Geography major
- Exposure to participatory mapping as an undergraduate research assistant



## BROADER SIGNIFICANCE

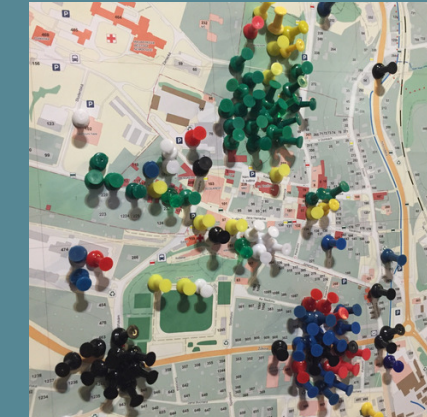
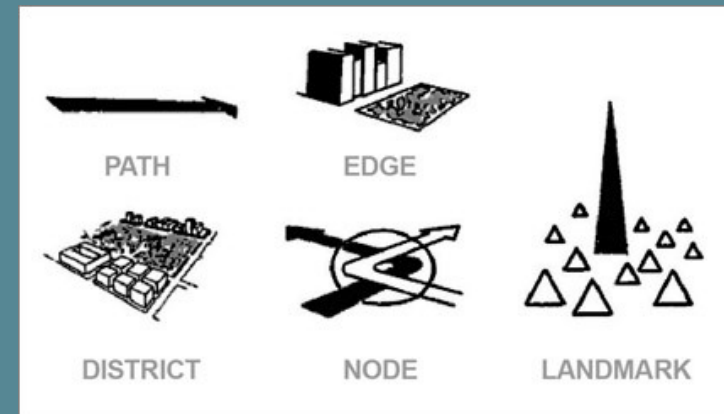
- Few direct comparisons between participatory mapping methods in terms of empowerment
- Synthesis of current literature is needed
- Newer mapping technologies need to be better understood

# METHODOLOGY





# THE HISTORY OF PARTICIPATORY MAPPING



## 20TH CENTURY AND EARLIER

- Map-making has been historically elite and exclusive
- Roots in imperialism
- Cartography as the "Science of Princes"

## 1960s

- First use of participatory mapping
- Gould and Lynch mapping
- Participants as subjects of research

## 1980s

- Shift away from completely top-down development approaches
- Technological advancements

## 1990s

- GIS becomes prevalent
- First Public Participation GIS workshop in Maine

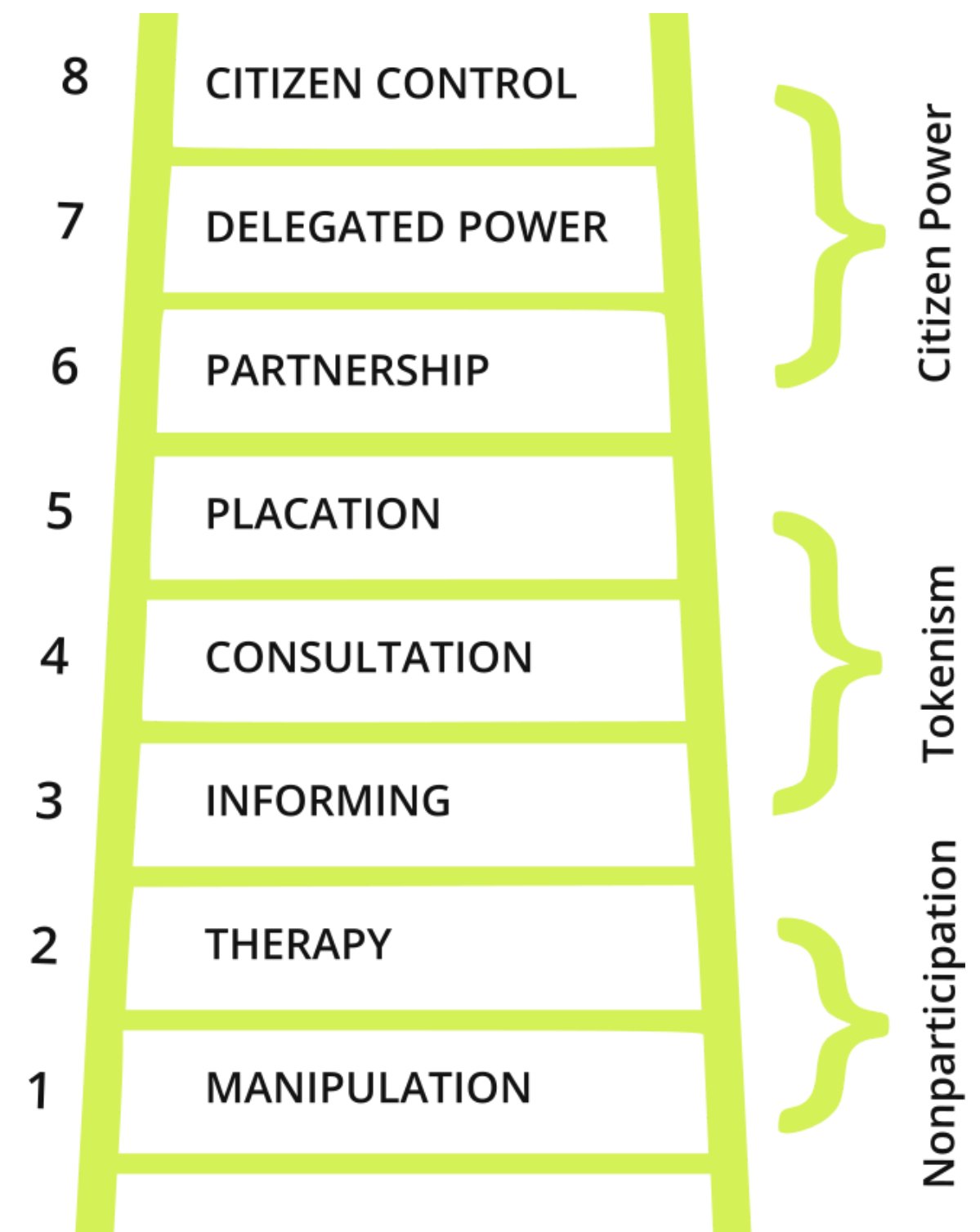
## Present Day

- Participatory mapping advancing with technology
- More innovative approaches
- "Neocartography"
- Access to data and online platforms

# MAPPING AND COMMUNITY ENGAGEMENT

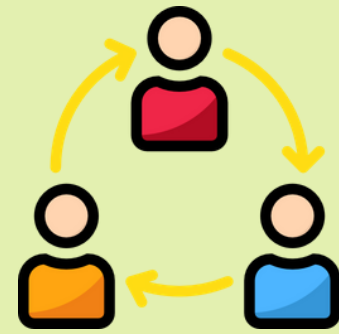
## HOW DOES PARTICIPATORY MAPPING ENGAGE COMMUNITIES?

- Participatory mapping has been shaped by principles of **equity** and **inclusion**
- The resulting maps can be a visual representation of what is important to a community
- The process can cultivate a **collective sense of place**
- Can contribute to **community cohesion**
- Raises awareness of spatial issues
- **Democratizes** the spatial decision-making process
- It can be a way to incorporate **diverse** and potentially oppositional priorities and groups
- Can enable communities to be more **in control**
- Participants become **leaders** instead of subjects of research



# COMMUNITY EMPOWERMENT

## EMPOWERING EFFECTS OF PARTICIPATORY MAPPING



- **Direct participation** in spatial decision-making processes
- Medium for spatial **representation** / recognition
- Map-making processes can cultivate **sense of ownership** of community assets
- Catalyst for **action** and momentum
- More **meaningful participation** than non-spatial engagement methods
- Allows community members to use the **language** and **tools** of planners and decision-makers
- Can expose more people to technical skills in GIS and spatial analysis
- Promotes **equity** and **inclusion**

## DISEMPOWERING EFFECTS OF PARTICIPATORY MAPPING



- Cost and complexity of certain technologies
- Inaccessibility of data
- Restrictive representations of geographical information
- Technical skills required
- More technical methods fail to incorporate qualitative knowledge (prioritize quantitative data)
- Some academics argue a lack of genuine community-based GIS
- Community dependence on experts
- Buzzwords used to legitimize projects
- Impossible to include every perspective or opinion



# EXAMPLE 1: PAPER MAPPING

## CONTEXT

- What: participatory community mapping for place-making
- Where: Western Canada

## THE PROJECT

- Combining experiential walks and paper mapping activities
- Goal was to understand the sense of place of older populations in an affordable housing community
- Incorporation of other senses
- Aimed to identify the community's values, existing resources
- Participants directed the mapping process and retained co-ownership of the maps



# EXAMPLE 2: ONLINE PGIS

## CONTEXT

- What: PGIS and Web 2.0 technology for participatory urban planning
- Where: Canela, Brazil
- Who: prototype developed for use by planners

## THE PROJECT

- Goal was to create a more accessible, interactive method
- Two-flow ways of information
- Ability to connect official and informal information
- Consensus building
- Information distribution, data available 24/7
- Solutions through participation
- Balance between interactivity and visualization
- Emphasis on usability

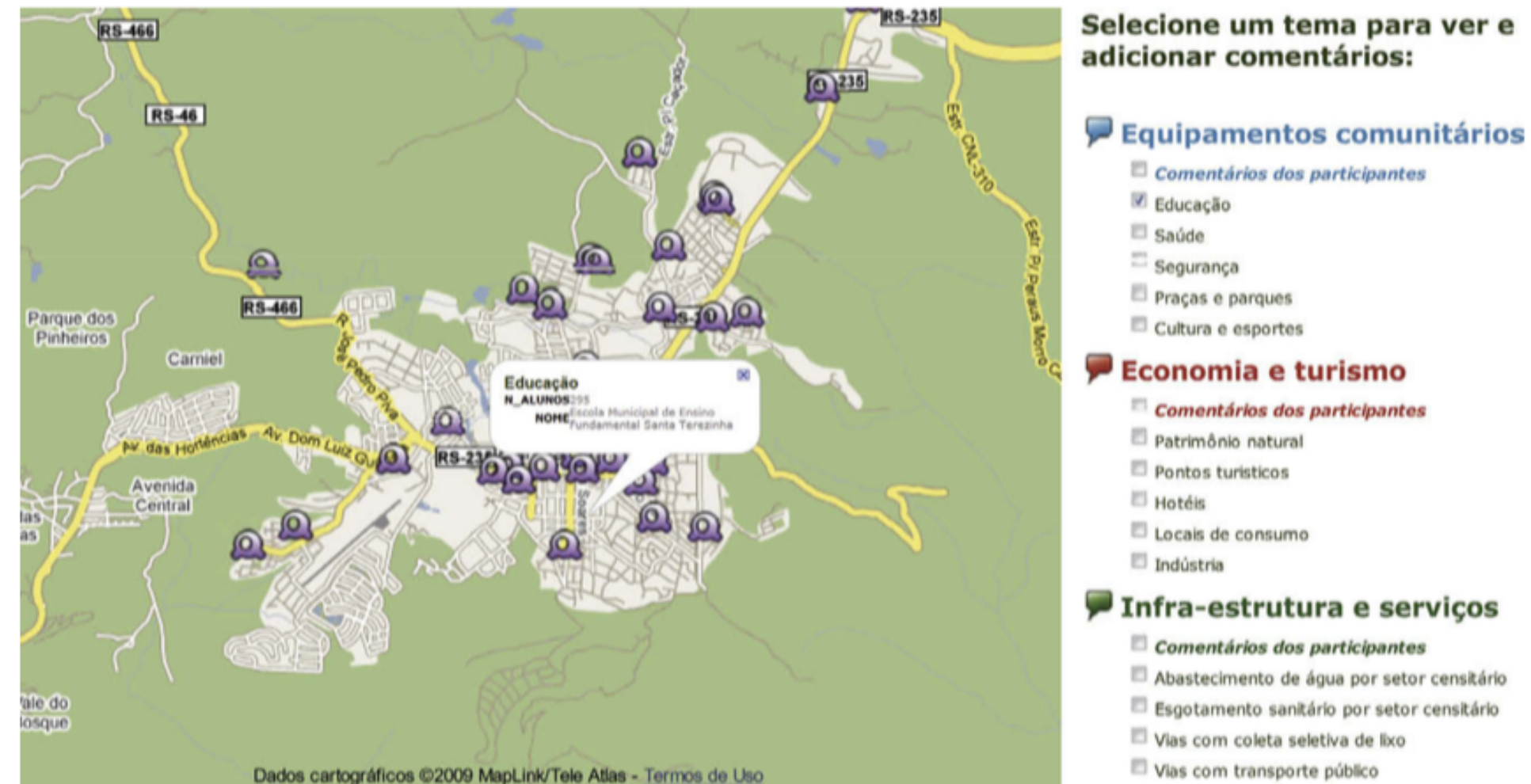


Fig. 3. Points out information about education and the urban planning topics by color.



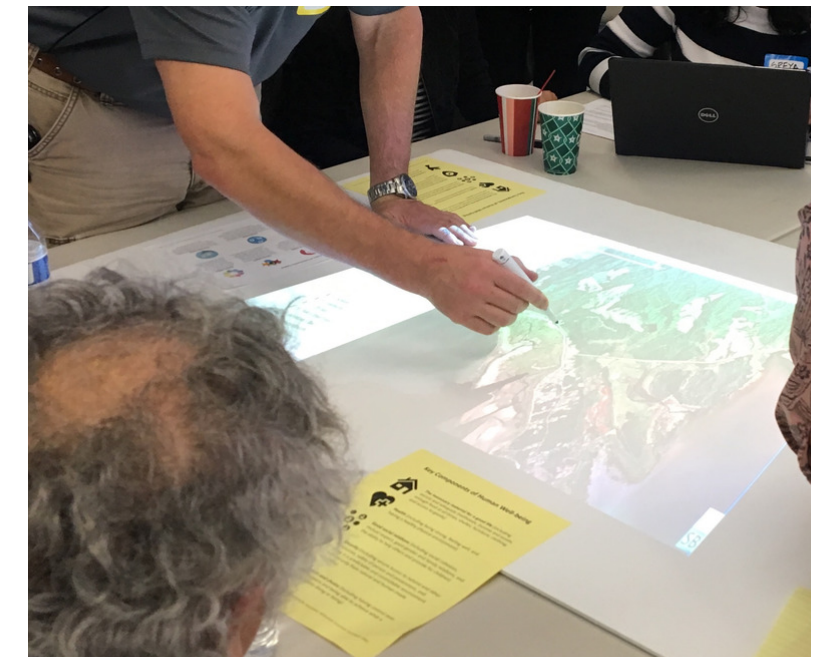
# EXAMPLE 3: THE WETABLE METHOD

## CONTEXT

- What: Stakeholder Engagement for Building Resilience to Sea Level Rise
- Where: Coastal Virginia
- Who: Old Dominion University

## THE PROJECT

- Utilized a Participatory GIS approach known as the weTable
- Process-driven approach
- Goal of promoting social learning and obtaining sociospatial data
- Participants found it to be between moderately and extremely useful
- Method was most useful for facilitating community-wide discussion





# **PARTICIPANT SURVEY**

## **COMMUNITY WORKSHOPS IN WESTPORT, WA**

- **Two participant workshops in November, 2018:**
  - **Friday workshop (community stakeholders): paper mapping and weTable mapping**
  - **Saturday workshop (public workshop): paper mapping**
- **Coastal Resilience Planning: three hazard scenarios**
- **Participants asked to map community assets**
- **Requested survey responses from workshop participants who had direct experience with both mapping methods**



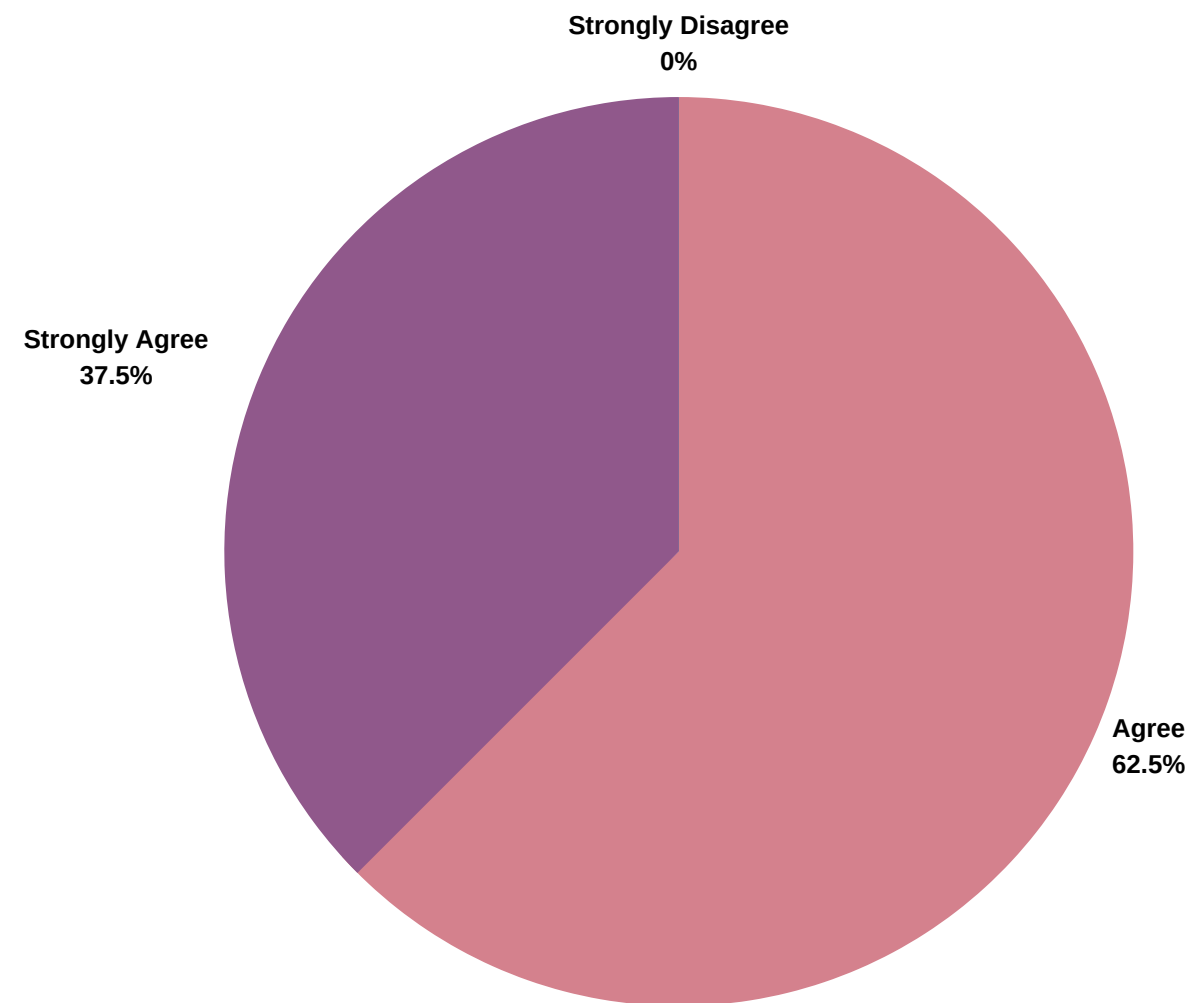


# SURVEY RESULTS

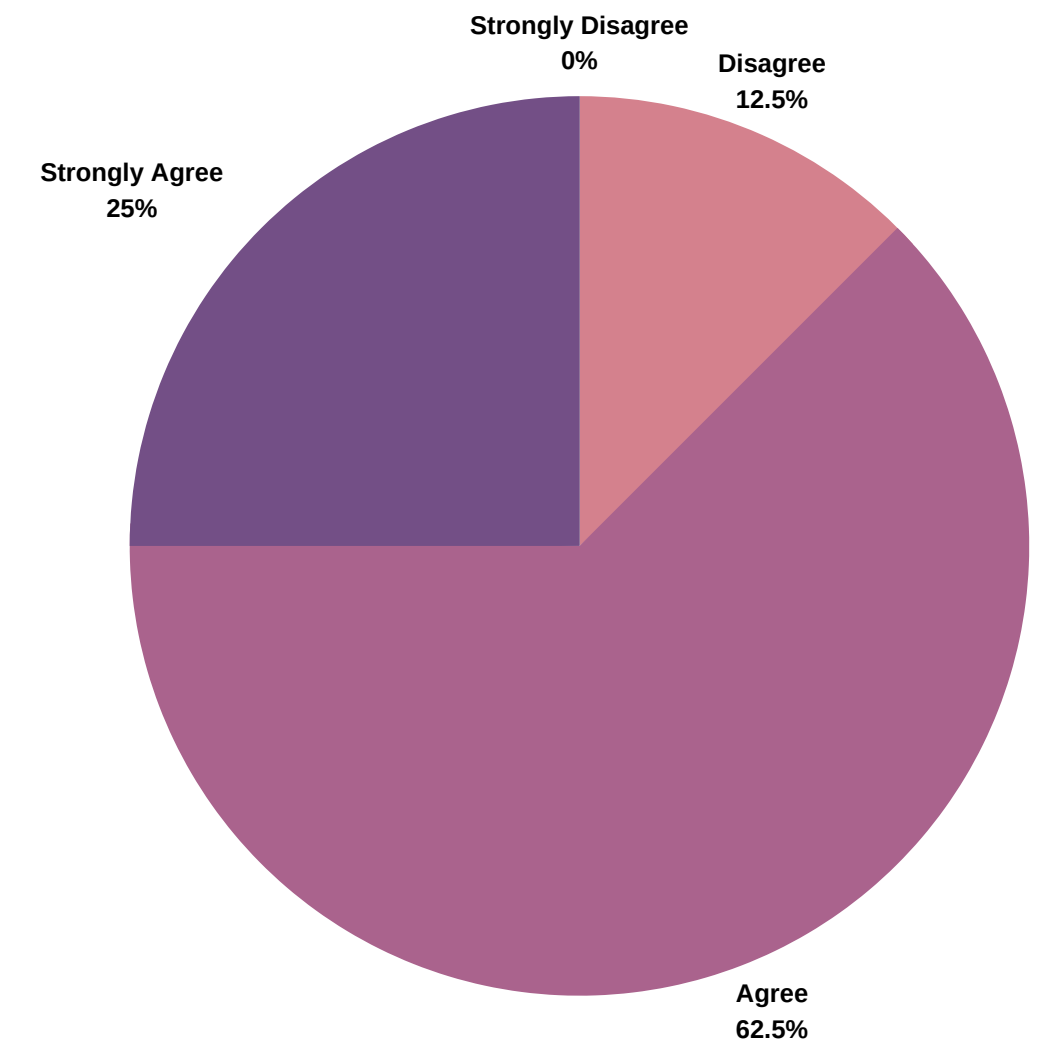
- 8 Survey Responses
- Quote from a participant:

"The activity promoted great engagement and interaction within the group. This resulted in great ideas and creativity. Participants enjoyed the activity. Everyone felt comfortable contributing."

**I felt comfortable using weTable for the mapping activities.**



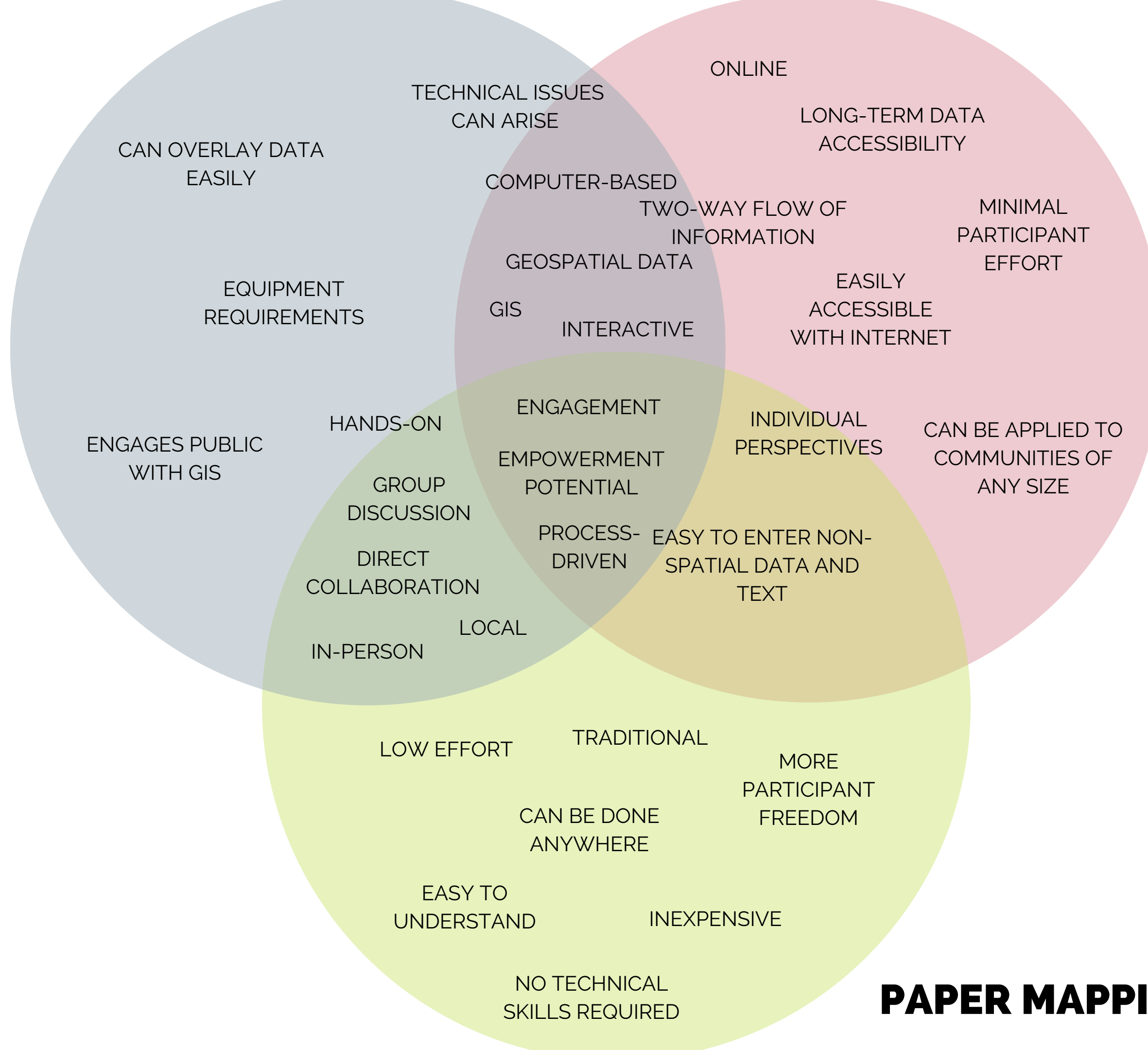
**The people in my group took part equally in the weTable mapping activities.**





# WETABLE

# ONLINE PGIS



# PAPER MAPPING

# BEST PRACTICES / GUIDELINES

## 1. INFORMATION



- Include strategies for incorporating a diversity of information types and formats, not just Euclidean spatial data.
- Promote community access and ownership over information and data produced.
- Incorporation of local knowledge, rather than exclusive focus on Western definitions of knowledge and meaning.
- Assume that local knowledge is valuable and expert.

## 2. PROCESS



- Invite and encourage (rather than coerce or demand) participation.
- Deliberately include marginalized groups in a community, both in outreach/recruitment of participants and in the process itself.
- Promote consensus-based decision-making.
- Promote a collective identity and vision and discussion of local issues.
- Integrate innovative partnerships between GIS users and grassroots community organizations.
- Ensure continuity between project leaders and community.

# BEST PRACTICES / GUIDELINES

## 3. SKILLS



- Provide opportunity and resources for marginalized groups to learn new skills.
- Only use tools that the community will know how to use, rather than focusing on expert-driven processes.
- Provide software literacy and technical skills in GIS, database management, GPS, photography, etc. if necessary.

## 4. TOOLS



- Consider the social, political, and economic context of technologies to choose an appropriate method.
- Consider cost and complexity of the technology.
- Ensure the tools have the ability to record diverse ways of understanding space.
- Allow for an integration of GIS and multimedia.

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# THANK YOU!



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# NEXT STEPS

- **Incorporate feedback**
- **Complete best practices**
- **Finish writing final report**

