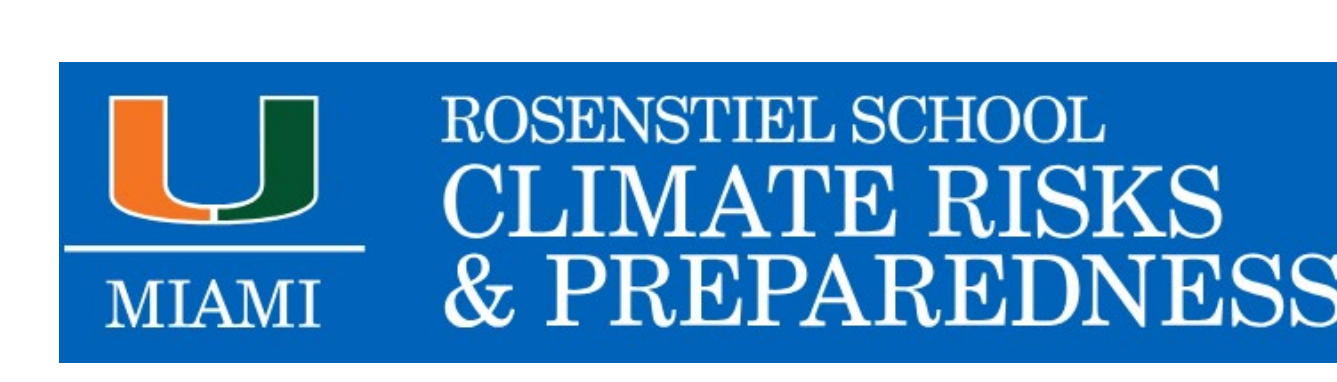


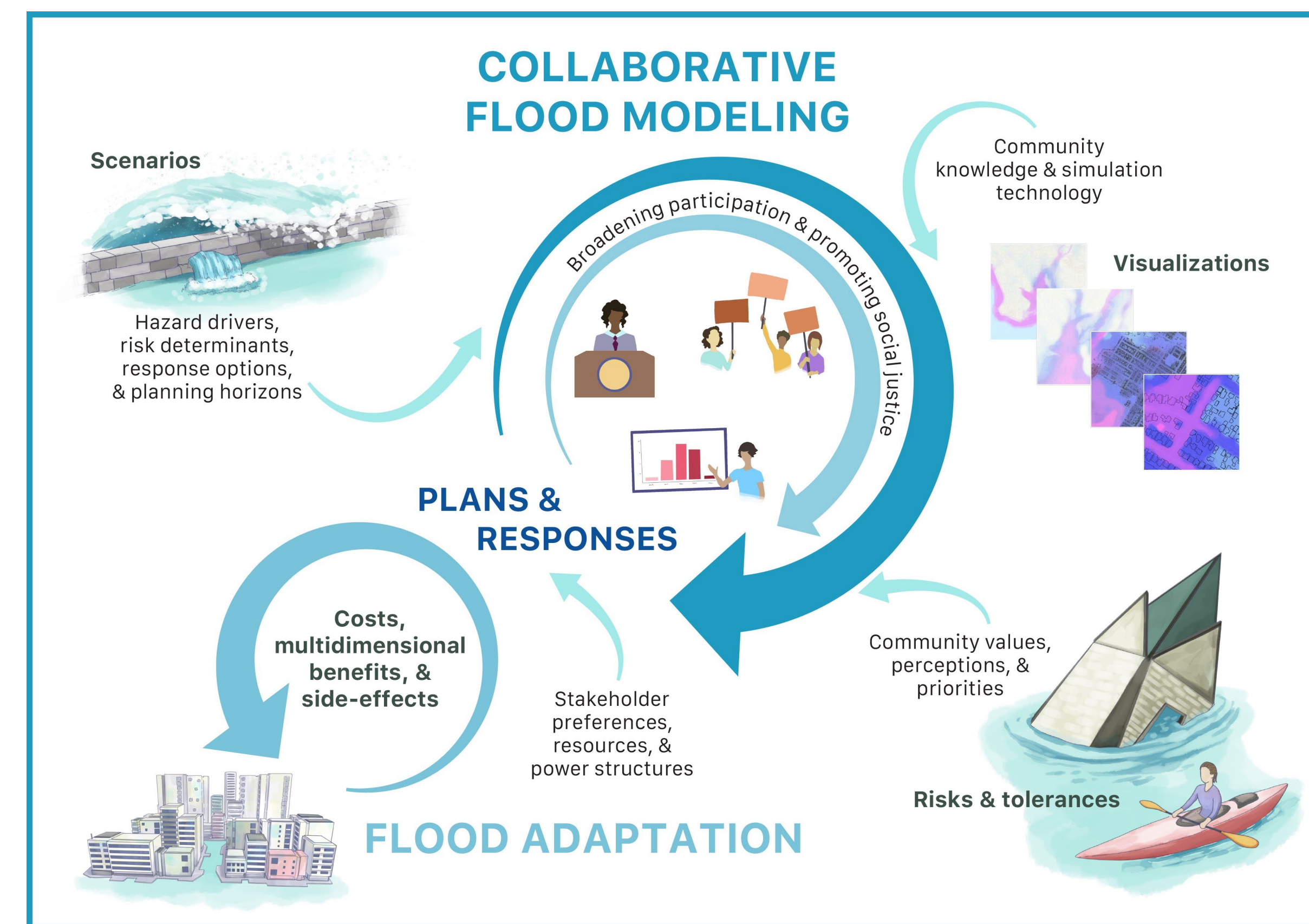
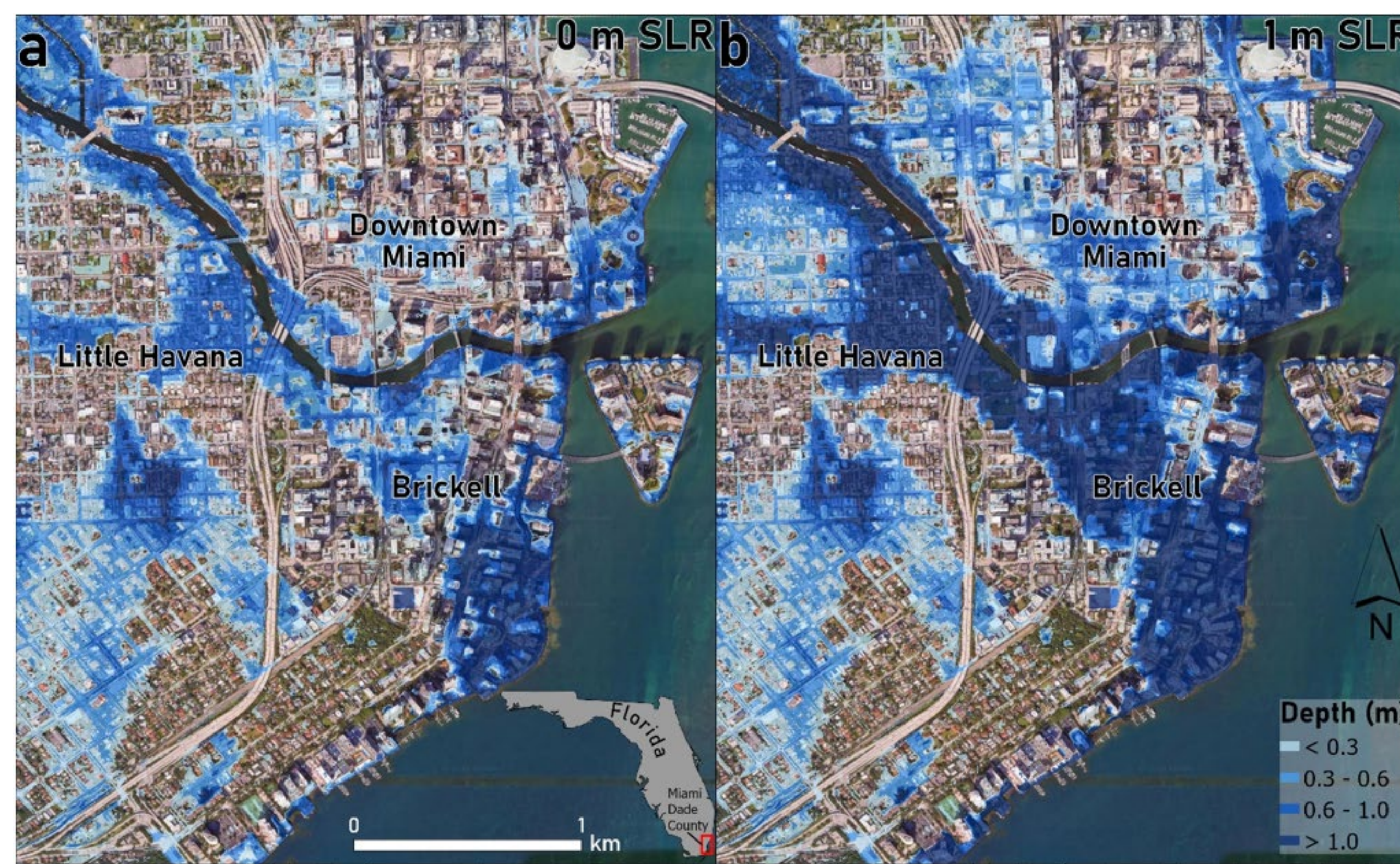
# Equitable-access flood modeling for timely and just adaptation in the near and long term

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IRG Type 2 [SCG-2305476]



## Project Challenge

- Resident/stakeholder participation is crucial to effective and equitable flood adaptation, yet extremely time intensive and challenging
- Most simulation software is too slow to support wide exploration of risks and coordination of responses
- New technology enabling rapid fine-scale urban flood modeling (below left) may be transformational for equitable risk exploration and adaptation (collaborative flood modeling, CFM, below right)

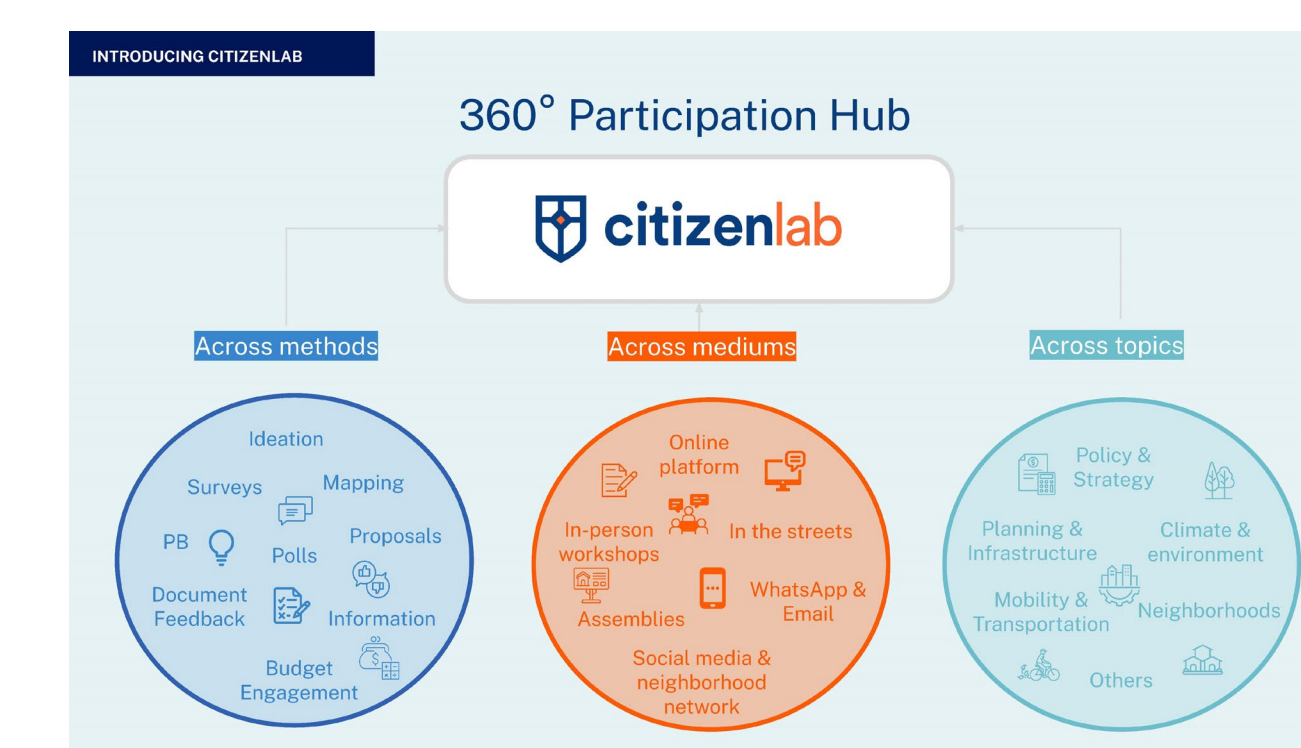
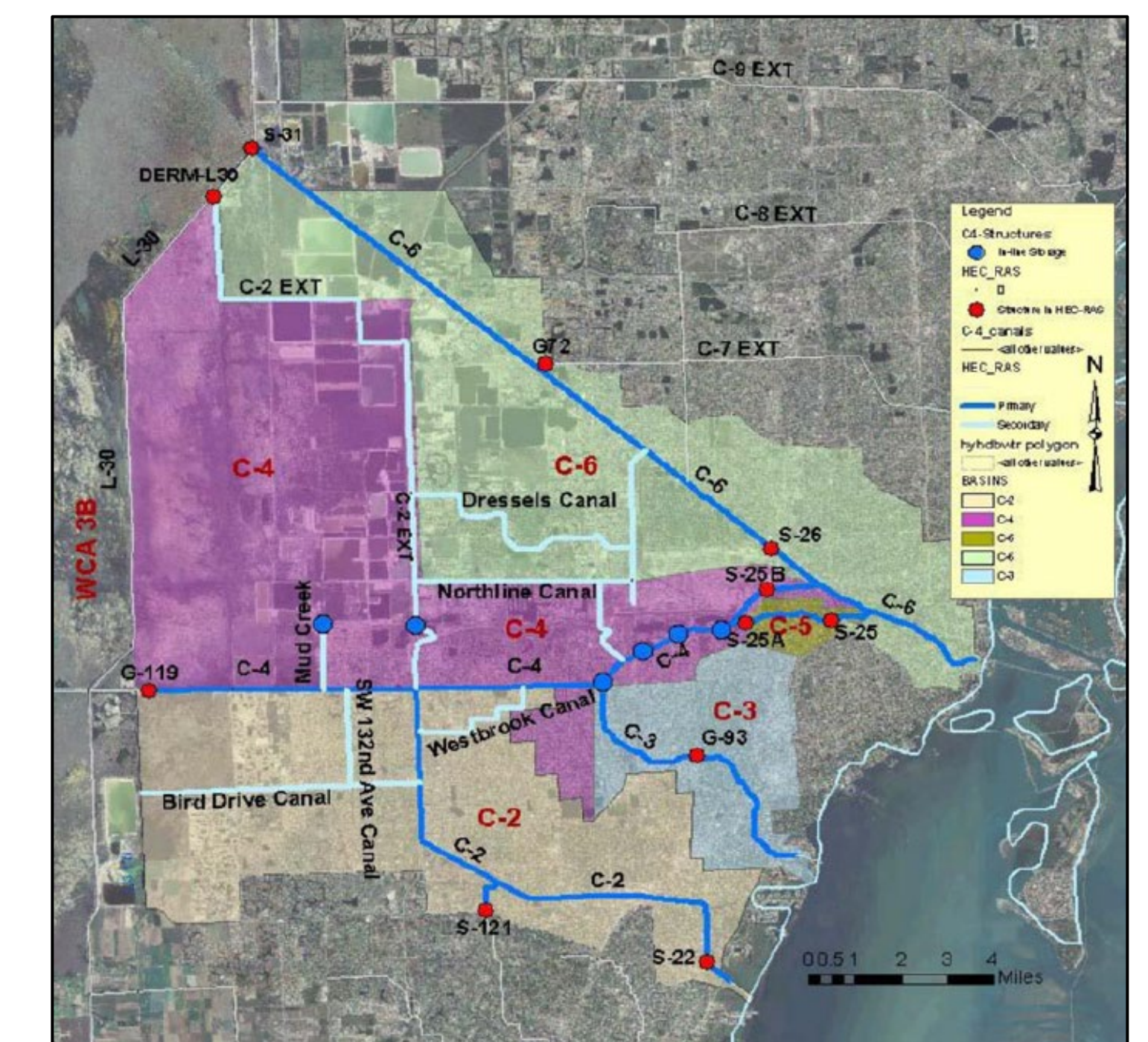


## Major Outcomes/Progress & Future Goals

- Task 1: overcoming barriers to participation/representation** (*baseline* MDC survey with *comparison* to preliminary MDC collaborative flood modeling—CFM by group)
- Task 2: fast-response, interactive flood simulation** (updating/validating PRIMo flood model & piloting interactive CitizenLab engagement platform)
- Task 3: testing equitable-access paradigm** (testing synchronous in-person CFM—targeted engagement—& asynchronous remote CFM—widespread engagement—*compared to baseline*)

### Accomplishments in year 1:

- Development of project theory of change and logic model
- Development and implementation (via Ipsos) of county wide survey to establish baseline for flood perceptions and participation—for then testing CFM
- Identification of project focus area (below right) with partners—with model refinement/validation
- Development of interactive CitizenLab project dashboard for collaborative flood modeling

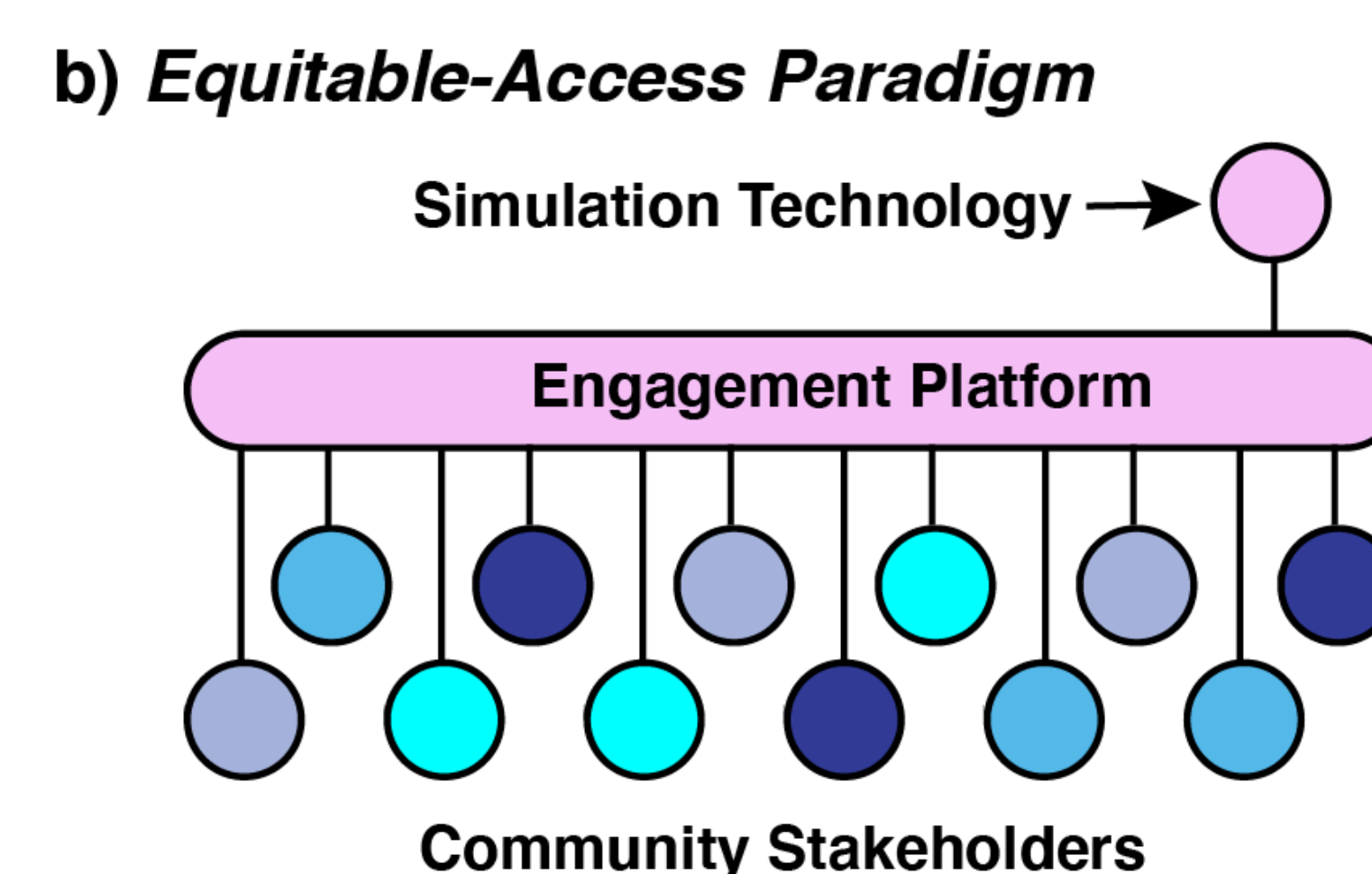
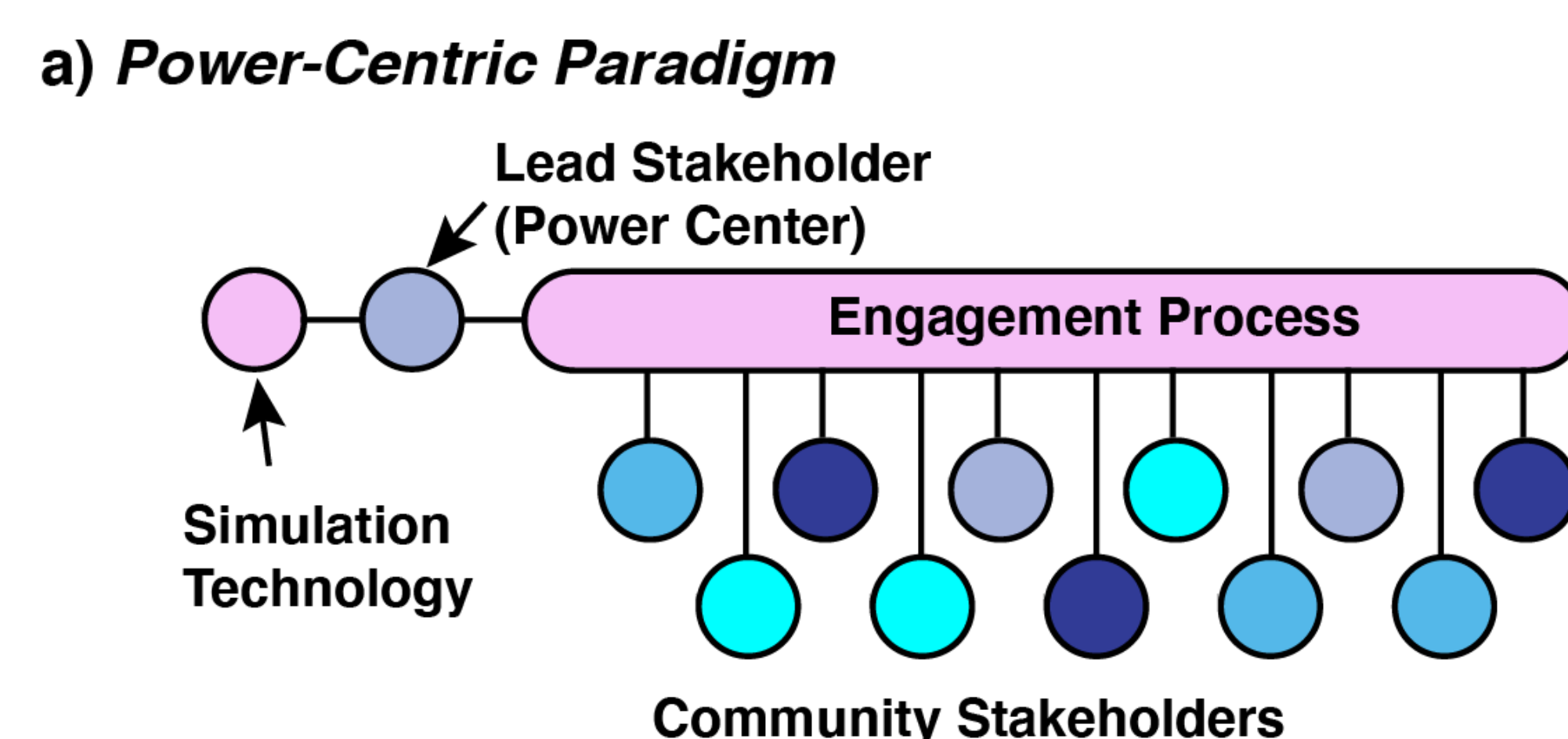


## Intellectual Merit

Developing and testing a new paradigm of flood adaptation marked by innovation in access to, and use of, flood simulation technology:

- (a)** filling technological gaps required for equitable access to fast-response flood simulations
- (b)** measuring if and how the proposed technology framework can improve outcomes such as increasing participation, shortening planning timelines, and more equitably distributing benefits and costs of flood measures

**Partners:** South Florida Water Management District, the Miami-Dade County (MDC) Office of Resilience, the Miami Foundation, and the Southeast Florida Regional Climate Change Compact



**Hypothesis: Shifting control over flood modeling will change the outcomes of adaptation**

## Broader Impact

Our new sociotechnical engagement platform for collaborative flood modeling, linking a digital engagement platform to a fast-response flood simulation tool, could represent a breakthrough innovation for helping diverse community stakeholders more equitably respond to climate change through project planning and implementation. We have designed the sociotechnical framework for transferability at neighborhood to regional scales globally to aid in climate adaptation.