BathMap: Designing a Platform for Mapping University Bathroom Accessibility

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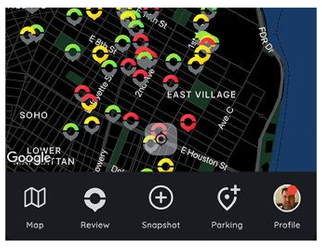
Challenge: "The bladder's leash"[1]

People with disabilities often plan their days around bathroom access.[2]



"UT students with accessibility needs can't access all restrooms. They want that to change." Austin-American Statesman

Crowd sourced maps provide information, but **data is sparse,** and **data quality varies.**[3]



RollMobility

In response, **disability communities have organized accessibility audits**[4], but organizing and analyzing the data is **labor intensive**, and hard to sustain[3].



OnTheMoov

[1]Kitchin and Law, 2001. [2]Carnemolla et al, 2024. [3]Hamraie, 2021. [4]Kitchin, 2002

Methodology

1. Formative study

One hour interviews, 5 interviewees:

- 1x wheelchair user
- 1x student organizer
- 2x university admins

Survey with 30 responses:

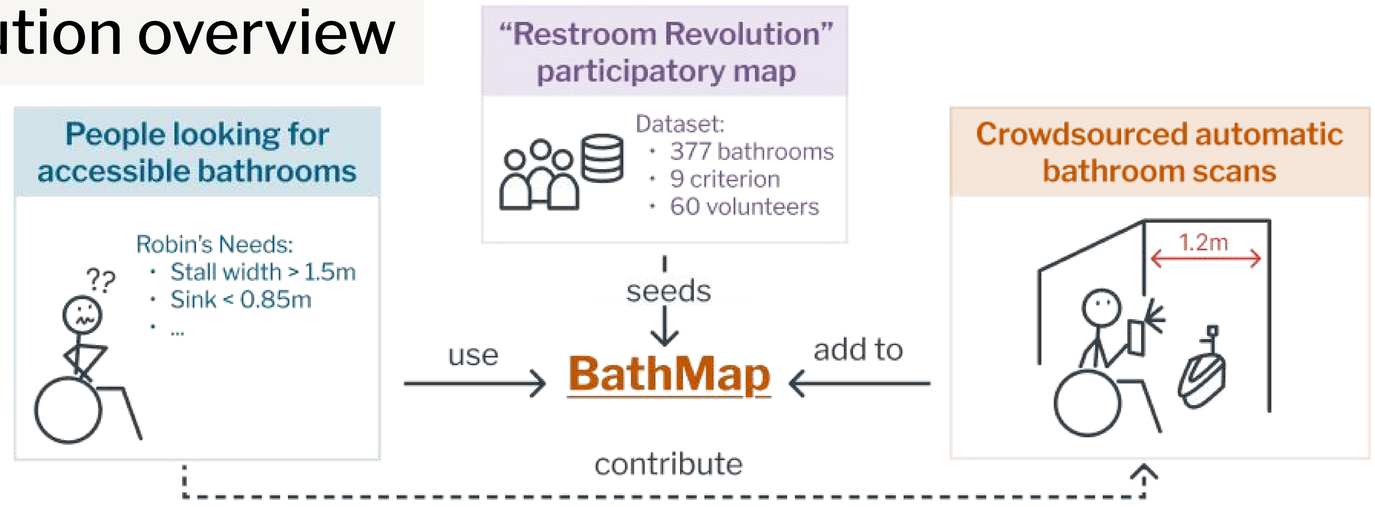
- 4 respondents had disabilities
- 11 encountered inaccessibility

2. User testing

One hour sessions, 4 participants:

- 2x wheelchair users
- 2x Restroom Revolution organizers

Solution overview



Our findings

1 Participants named bathrooms as a top priority

"The biggest, number one issue for most other students is accessible bathrooms."

"Before every semester, I spend two to four hours [mapping accessible bathrooms] on a Saturday"

"Bathroom renovation is a major focus for us right now, driven by student input"





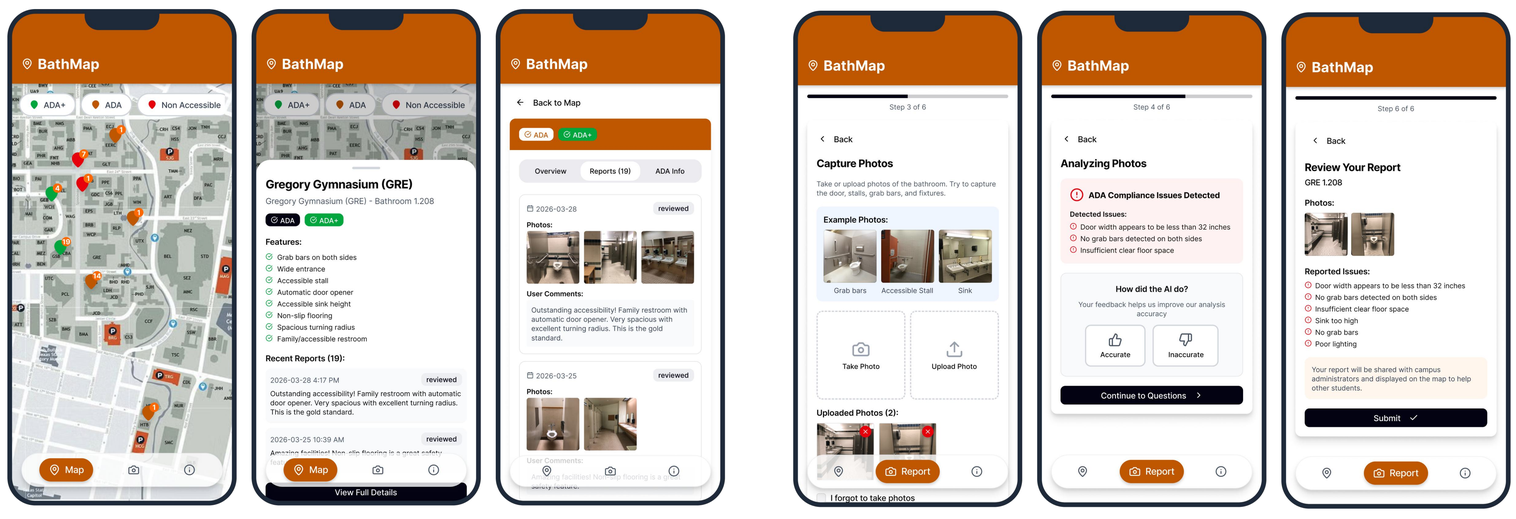
2 We designed a prototype bathroom mapping app



(a) Searching for bathrooms by accessibility checklist



(b) Using AI to assess bathroom accessibility from photos



(a.1) (a.2) (a.3) (b.1) (b.2) (b.3)

3 Participants liked the prototype design, but also raised questions that warrant further investigation.

"This is [really] awesome!"

"**Who will own the platform?**"

"**I'd be more willing to report**, and use the tool to assess a bathroom, **if I knew that the AI is doing all the work**"

How will this work for blind people?

"I really appreciate that you define what [accessibility features each bathroom has]. It would be interesting to also list what it's missing."

These checklists don't match what I look for in bathrooms.