OVERVIEW

We are excited to report that, with the support of the Metagov interoperability grant, we have been able to successfully codesign and deploy an interactive database and visualization tool to make visible to the communities of Jamaica, Queens, New York City and any interested person the relationship between community voices and decisions made by the New York City Department of City Planning for the groundbreaking Jamaica Neighborhood Plan.

Methodologically, we are contributing to the field of Human-Computer Interaction by piloting a multi-stakeholder approach to Codesign, developing deep partnerships with both urban planners and a community cohort to design an interoperable data structure that supports 1) sensemakers and decision makers in systematically and rigorously listening and making decisions informed by the constituency voices they collect, and 2) makes that rigorous mapping and relationship visible to those from whom they've heard, and the broader community.

We conducted this proposed work by 1) recruiting a community cohort and an urban planning cohort, 2) running codesign workshops and compensating the community cohort for their participation in those workshops, 3) building and deploying our system, and 4) evaluating that system through user studies.

Through this process, we gained a better understanding of the priorities of an often marginalized community that experiences a great deal of distrust towards its decision-makers. Through our engagement with this community, we discovered a strong desire for decision-makers to *share their work*. We did this through a detailed overview of 1) data collection mechanisms, 2) questions asked, 3) population engaged, and 4) how voices informed decisions, or did not. In practice, we learned that visualizations needed to be highly accessible, straightforward, engaging, and demonstrate the breadth and scale of the work. Furthermore, the relationship between voice and decision, while essential, was not the only challenge; we also learned that the broader process of how city plans and decisions are developed and made accessible to the community was a significant barrier to acceptance. Therefore, we are working not only to demonstrate how voices impact decisions but also to clarify the overall process of decision-making, including when decisions are open for debate and discussion, and when and how there is an opportunity to change decisions in real-time, thereby broadening and enriching our project.

Many democratic and representative processes require constituency listening (a leader making decisions informed by those whom they serve or represent): be it at a national, city, or organizational scale. Therefore, the system we have designed and tested in NYC has the potential to be transferable to other constituency listening contexts, such as within labor unions or in other city governing matters. With this transferability, we are excited to contribute to the Metagovernance mission by developing interoperable civic technologies that support deliberative and other forms of democracy, making them available in an easy-to-use and transferable tool. By doing this, we aim to support transparency and ease of decision-making informed by a constituency across many forms of democratic practice.

We are now evaluating the platform's impact through user studies, event tracking, and transferring the tool to another context, as well as designing a controlled experiment to assess its impact on felt trust, perceived legitimacy, and sense of individual and collective agency. Due to the fluid nature of fieldwork and partner-based research, we were compelled to adjust our deployment and design timeline to align with that of our partners, ensuring we had all the necessary data and feedback before deployment. We have requested a short, no-cost extension of the award period to allow us to run this final controlled experiment, a description of which is in the final section of this report.

METHODS

Methodologically, we conducted two sets of co-design workshops following a series of five shorter workshops, during which we collaborated with a diverse cohort of community members, including members of the community board, local artists, young aspiring architects, activists, and retirees. In these sessions, through in-depth discussions and interactive workshops, we collaborated with the community to understand their priorities during these community engagement workshops. What kind of analysis mattered to them? What level of detail was essential for a platform to be seen as legitimate and rigorous? What visualizations and ways of showing data resonated and were accessible? What kinds of visualizations and ways of structuring data reflected what they experienced? How do we create a respectful platform? In this process, we learned that *source* – how a piece of feedback was collected, what questions were asked, who was asked, etc – felt essential to have. Furthermore, relationships between things, such as the connections between environmental issues and economic development, and the importance of not only open space but also the resources required to maintain it, were essential to make visible through visualizations. Interconnection was prioritized over frequency in these connections.

We explored these questions through storytelling exercises, sorting and visualizing data, evaluating existing visualizations, and more. Furthermore, we examined how to integrate AI into the platform in a manner that supports community understanding rather than hindering it. Through these exercises, we learned that AI-aided search was helpful and supportive; AI-generated summaries backed by human-generated data with citations were useful. However, AI interpreting or speaking in a community voice was perceived as a violation of trust.



PLATFORM DEVELOPMENT AND DEPLOYMENT

In the end, we designed and deployed an initial platform that makes these connections visible, utilizes AI in a manner that feels respectful and accurate to the community, and integrates visualizations that make patterns within the data accessible while highlighting the connections between themes and patterns.
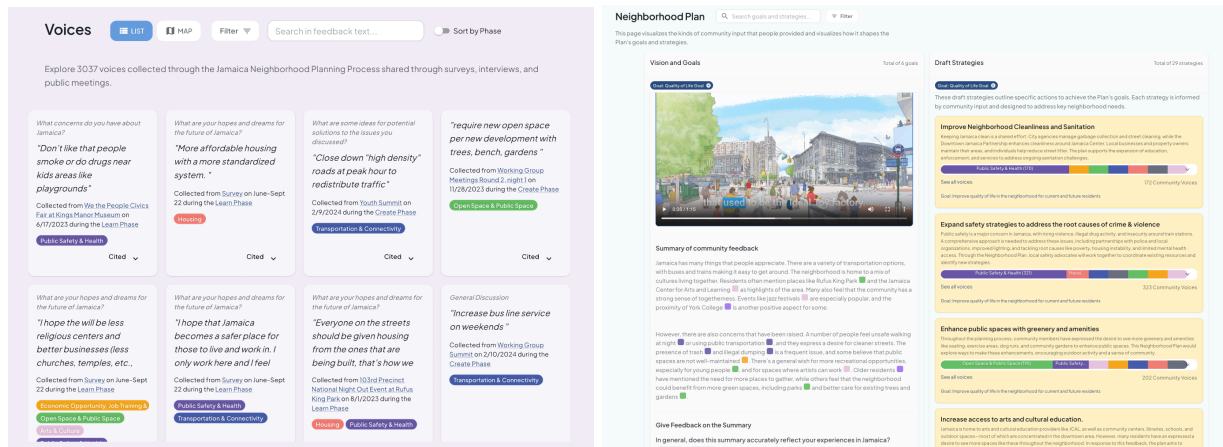
Here, we see screenshots from the Voice to Vision tool – the manifestation of the Constituency Listening Project for the Jamaica Neighborhood Plan. On the left, we show an image of the **Voices** page, showing each voice collected, the prompt it was collected with, the data collection mechanism, the event in which it was collected, the location, tag it was tagged with, and where it was cited in the final decisions (or why it was not cited or included). To the right, we see an image of the **Vision** page, which displays the actual decisions made with the voices, along with AI-generated summaries that include citations of the voices explaining the proposed action.

Further, we show an example of a visualization highlighting the connections and patterns between themes in a way that 1) reveals interconnectedness, 2) still shows frequency, and 3) does not wipe away any one voice, but shows them collectively.

As we continue to evaluate our work through user interviews and workshops, we are writing and publishing a paper on this research. After submitting, we will return for a redesign based on the feedback we receive during this evaluation phase and redeploy in the summer, running a randomized experiment to evaluate the impact in a more precise manner.
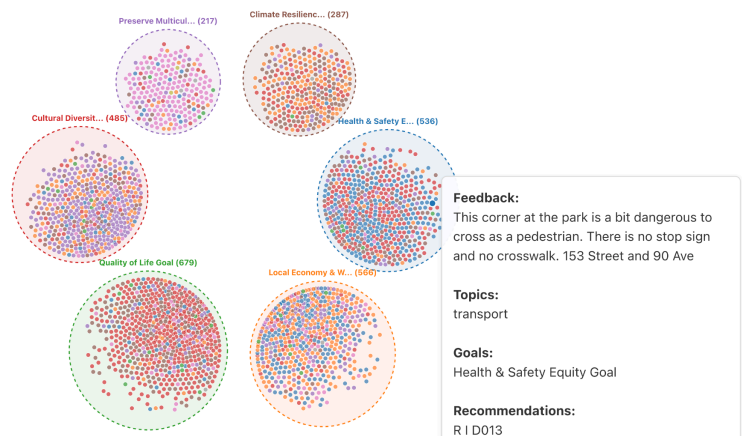
CONTROLLED EXPERIMENTAL EVALUATION

To rigorously evaluate the impact of our Voice to Vision approach on democratic legitimacy and trust, we are conducting a controlled experiment examining how different methods of linking community voices to decision outcomes affect participant perceptions and engagement. This experiment, currently underway with results to be published this fall, addresses how transparency mechanisms influence trust in democratic processes.

The experimental design employs a two-week protocol with 260 participants. In week one, participants advocate for competing positions on civic issues through 150-200-word posts. After processing these submissions, participants in week two receive feedback through one of five conditions: a control showing only final decisions, or presentations linking voices to decisions through thematic organization, narrative integration, participatory visualizations, or personalized dashboards.

We test key hypotheses about transparency and democratic trust, predicting that participants who see explicit voice-decision links will report higher legitimacy, agency, and engagement compared to those seeing no connections. The experiment also examines how winning versus losing affects three trust dimensions: horizontal trust between opposing groups, vertical trust in decision-makers, and process trust. We hypothesize that transparency conditions will reduce the gap between winners and losers.

Primary measures include sense of legitimacy, agency, willingness to engage, and feeling heard. Secondary measures capture the three trust dimensions, satisfaction, fairness perceptions, and process understanding. This controlled evaluation complements our field deployment in Jamaica, Queens, providing laboratory precision alongside real-world validation.

Results will be submitted to the CHI conference and inform the next iteration of our Voice to Vision platform. By combining community codesign insights with experimental evidence, we aim to contribute practical tools and theoretical understanding to digital democracy and civic technology.

TIMELINE

Phase 1: Community Engagement and Codesign (Months 1-6)

- Recruited a diverse community cohort and urban planning partners
- Conducted five preliminary workshops to establish relationships and understand priorities
- Ran two intensive codesign workshops with compensated community participation
- Developed platform requirements based on community input

Phase 2: Platform Development (Months 4-8)

- Designed data structure and platform architecture
- Implemented AI integration features following community guidelines
- Built interactive visualization components
- Conducted iterative testing with community partners

Phase 3: Deployment and Initial Evaluation (Months 8-12)

- Launched the Voice to Vision platform for the Jamaica Neighborhood Plan
- Gathered user feedback through interviews and usage analytics
- Documented initial findings and platform reception
- Prepared materials for academic publication

Phase 4: Controlled Experimentation (Months 12-15) [CURRENT]

- Designed and implemented controlled experiment protocol
- Currently recruiting and running an experiment with 260 participants

- Analysis and results preparation scheduled for fall 2024
- CHI conference submission planned

Phase 5: Iteration and Transfer (Months 15-18)

- Platform redesign based on experimental findings and user feedback
- Summer redeployment with enhanced features
- Transfer of tool to additional constituency listening contexts
- Final evaluation and impact assessment

BUDGET
Participant Compensation at Workshops: $5,000
Compute: $1,500 (AWS, Anthropic)
User Testing Study: $300
Final Experiment: $1,800
MIT Overhead: $900