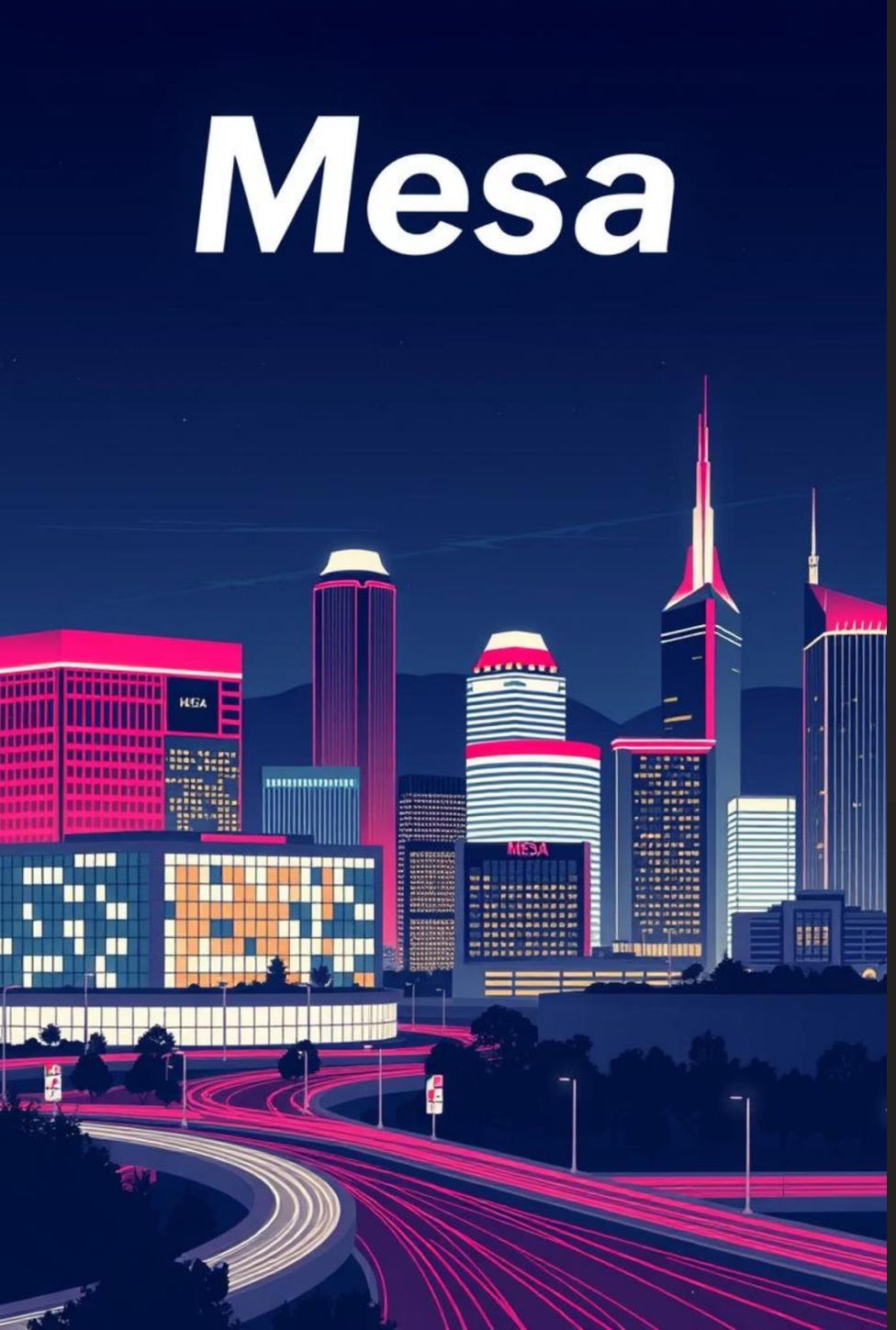

Mesa Natural Gas Awareness Survey

Usability Report

Enhancing Safety Through Improved Survey Design

Project Duration

6 Weeks

Client

City of Mesa

University Partner

Arizona State University – Project Cities Initiative

Team

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Introduction

This project, in collaboration with the City of Mesa, aimed to evaluate and improve the Natural Gas Safety Awareness Survey. Our goal was to enhance public understanding of natural gas safety, identify knowledge gaps, and support educational outreach for a safer community.

Project Goals

1

Mesa: A City on the Rise

Addressing the needs of a growing population and increasing utility usage.

2

Natural Gas: Vital yet Safe

Emphasizing safety awareness for an essential daily resource.

3

The Survey: A Feedback Tool

Gathering crucial insights from residents to improve safety initiatives.

Our Mission

Engage Residents

To effectively engage more residents.

Collect Insights

To gather accurate and meaningful data.

Empower Community

To equip the community with vital safety knowledge.

Research Process

Step 1: Spotlighting the Gaps

UX audit of existing survey identified usability issues and engagement barriers.

Step 2: Understanding the Users

5 Mesa residents participated in think-aloud protocols and questionnaires to uncover frustrations and improvements.

Step 3: Connecting the Dots

Analyzed findings from UX audit and user interviews to identify patterns and pain points.

Step 4: Implementation

Redesigned the survey by simplifying language, adding context, and improving structure for better engagement.

Key Findings

- **Natural Gas Familiarity:** Varying knowledge of appliances.
- **Safety Practices:** Limited awareness of exposure signs and leak protocols.
- **Pipeline Awareness:** Inconsistent knowledge of nearby pipelines.
- **Gas Leak Response:** Knew to evacuate, unsure of emergency numbers.
- **Carbon Monoxide Awareness:** Confusion about CO symptoms and gas connection.
- **Survey Experience:** Logical flow and easy to complete.
- **Difficult Questions:** CO-related questions posed a challenge.
- **Meter Safety:** Limited knowledge of meter location or shut-off.

UX Audit Findings

Issues Identified

- **Lack of Context:** "Affected Public" term unclear.
- **Complex Wording:** Long, confusing questions.
- **Partial Spanish Translation:** Inconsistent language support.
- **Crowded Layout:** Text-heavy design impacted readability.
- **Technical Questions:** Lack of supporting information.

Positive Observations

- **Concise Questions:** Clear and direct wording.
- **Logical Flow:** Easy-to-follow question sequence.
- **Focused Scope:** Covered awareness, behavior, and safety.
- **Quick Completion:** Only 9 questions, user-friendly.

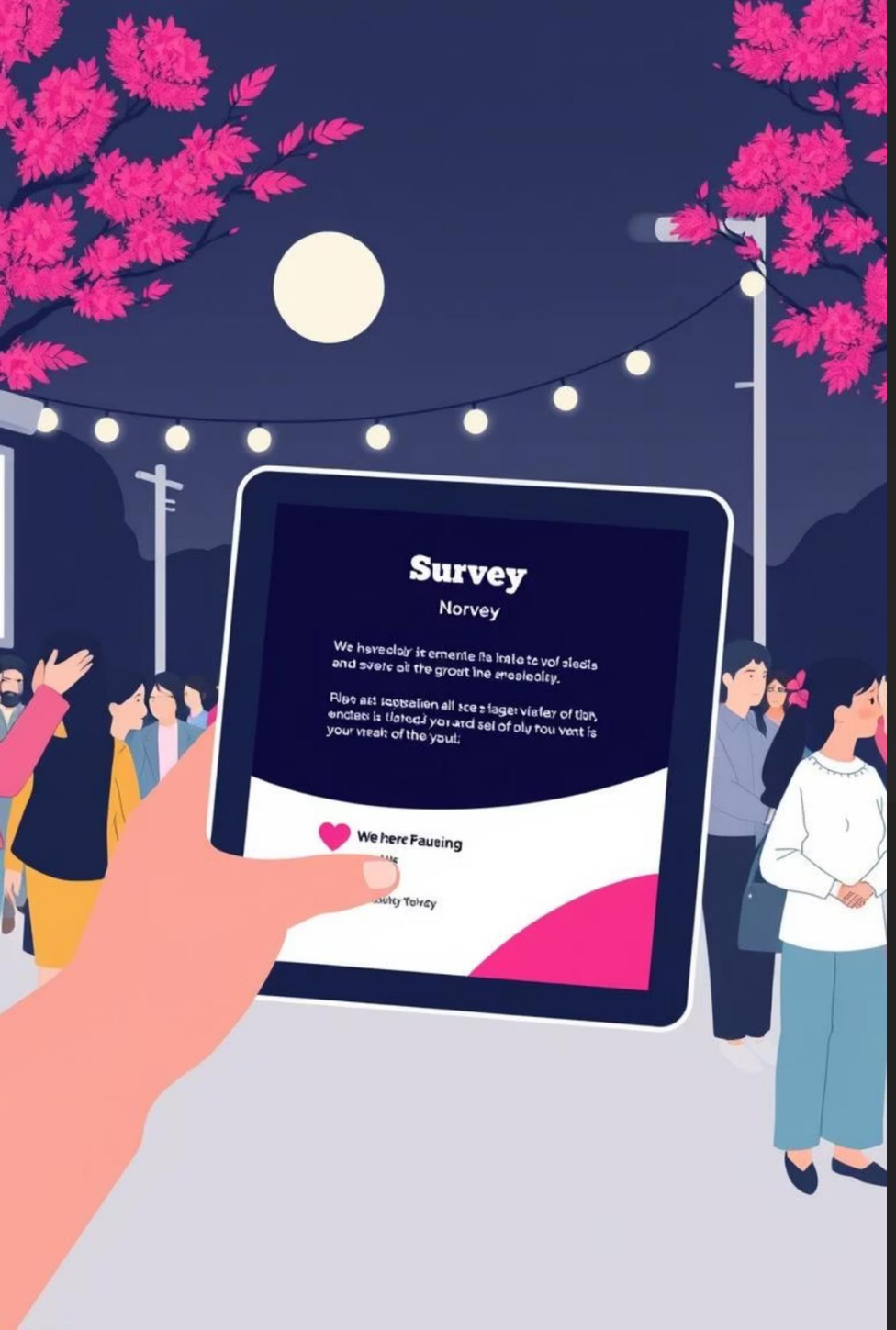
Suggestions & Implementation

Suggestions for Improvement

- Simplify technical questions with plain language and context.
- Add multiple-choice leak indicator questions.
- Use scenario-based questions for emergency education.
- Include questions on meter location and usage awareness.

Final Implementation Changes

- Added clear purpose and context to the survey.
- Revised questions for clarity and simplicity.
- Enhanced knowledge assessment through structured formats.
- Improved overall usability and engagement.



Next Steps & Conclusion

Next Steps

- **Retest Improved Survey:** Conduct validation sessions with new users and refine based on feedback.
- **Educate Users:** Develop brochures, infographics, and videos focusing on gas leak identification, emergency protocols, and pipeline safety.

Conclusion

This project demonstrated how user-centered design can significantly improve public safety tools. By identifying gaps, redesigning the survey, and planning for educational outreach, the City of Mesa can increase community safety awareness and engagement effectively.