Access to Places

Design Expo

ANTONIO | RASHIDA | LUMING | EMILY

Our Purpose

The goal of our project is to make NYC subway stations more navigable for individuals who are blind.

WHY IS THIS NECESSARY?

A problem with the New York subway station is its reliance on visuals for information. This dependence is a barrier for those who are blind to access information regarding platform locations, routes, safety signage, entrance and exit locations.

Problem #1

Subway lacks accessible signage.

Problem #2

Station layouts are widely varied.

Problem #3

Reliance on help from others means lack of independence.

The people we are designing with share the qualities of being:

1. Blind
2. Independent
3. Has access to information and technology
4. Employed or seeking employment
5. Are mobile
6. Owns a smartphone

WHO ARE WE DESIGNING WITH?

Daisy

29 years old
Lives in Harlem
Works in non-profit sector

Catrina

32 years old
Lives in Williamsburg
Works in media

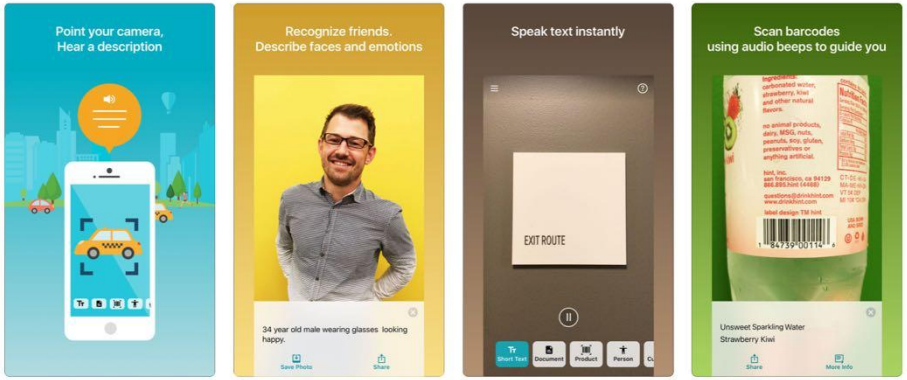
Jake

38 years old
Lives in Flatbush
Works in tech industry

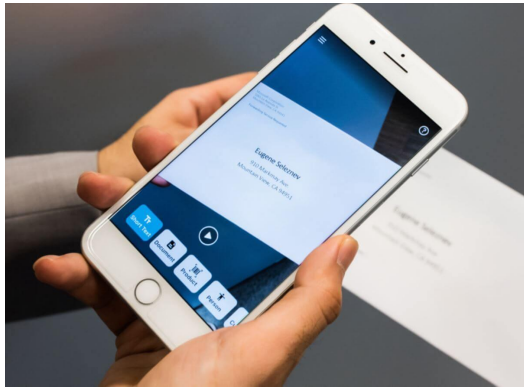
Current MTA Physical Signage

- Bubble strips on train platforms
- Limited Braille signage

Seeing AI

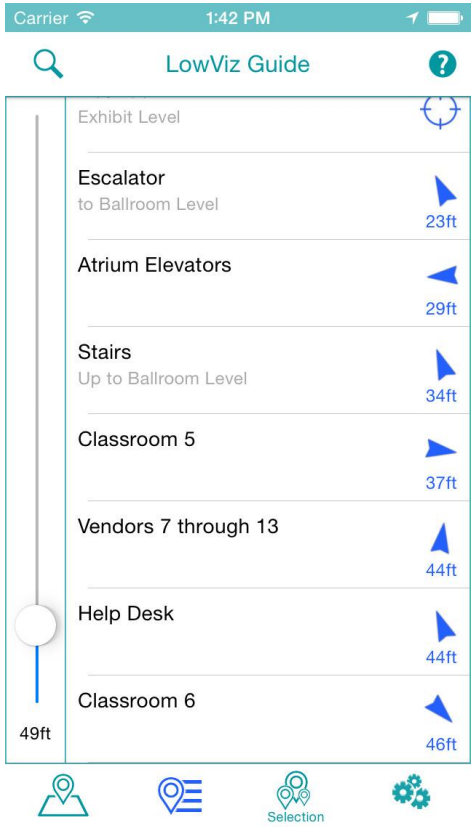


- Scans and reads text that is seen in a person's surroundings
- Uses AI to describe people, places and products



LowViz Guide

- **Indoor navigation in pre-mapped locations**
- **Beacons distributed throughout target location**



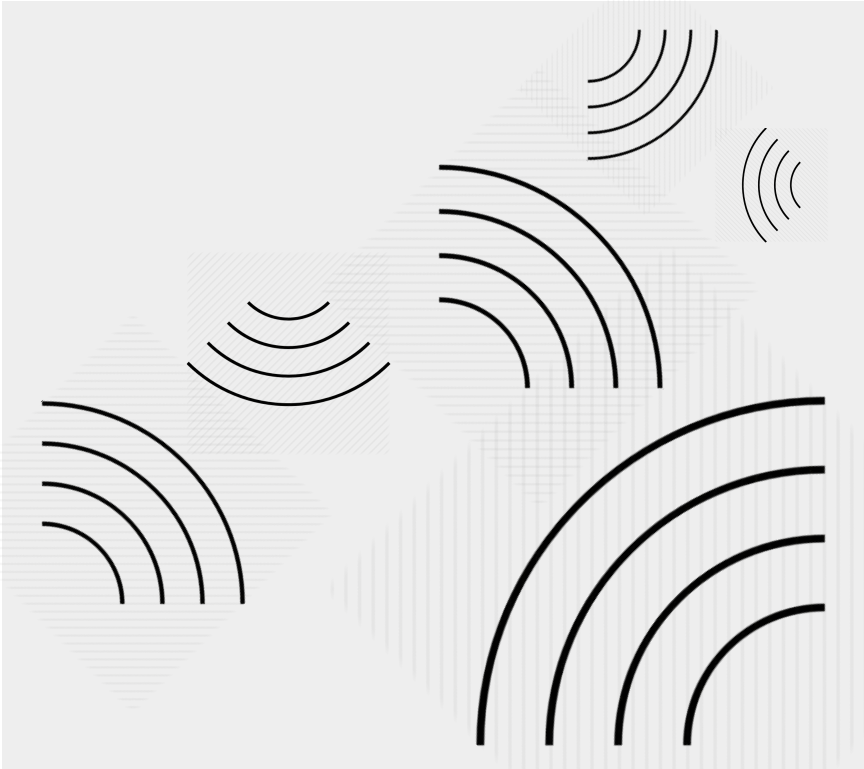
BlindSquare

- **Announces current street location and nearby POIs**
- **Outdoor (non-subway station) only**

Our Proposal

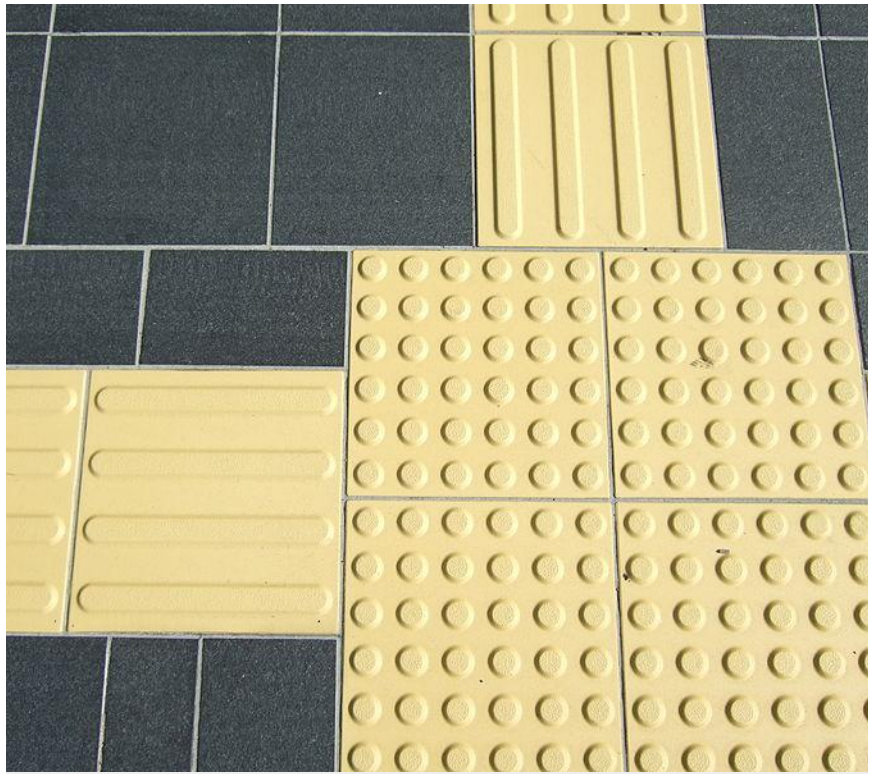
We would like to make the information that is readily available to sighted travelers accessible to others, as well as create ways to make the physical topography of stations more legible.

A system of low-power sensors and networking devices to make this information available to users.



A mobile app that works in conjunction with sensors placed in the subway stations to textually and verbally communicate directions, safety, exit and entrance information.

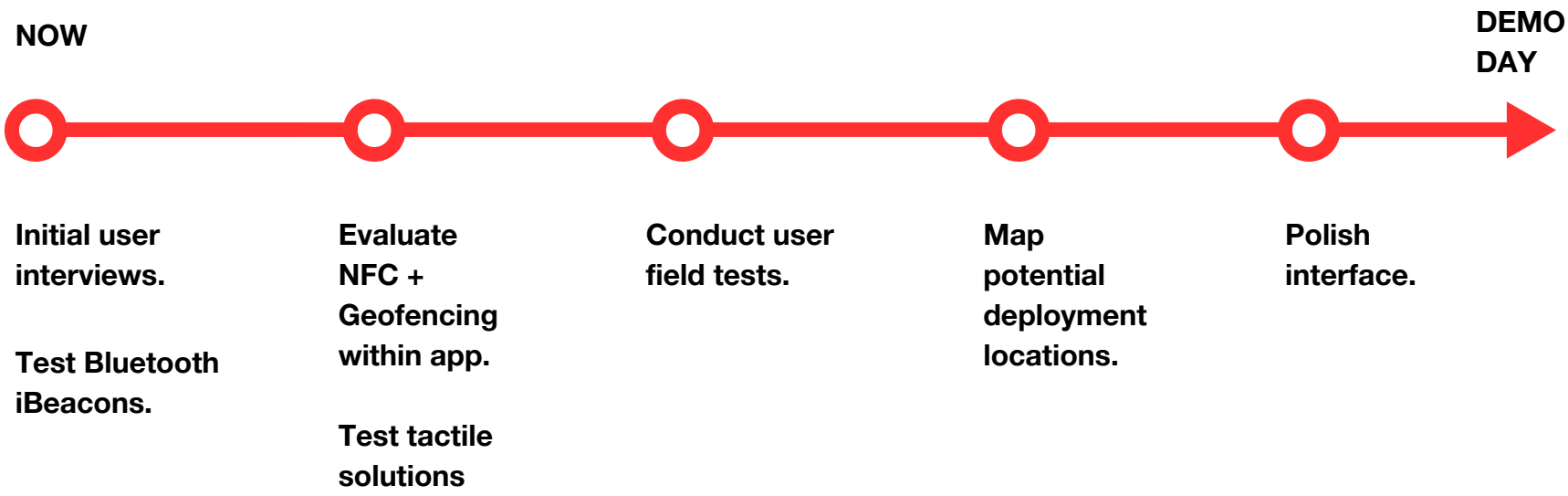
A tactile surface that provides a form of navigation.



Our Steps

1. User interviews
2. “Hello World” using Bluetooth beacons
3. User flow script with beacon app

OUR ROADMAP


NOW
DEMO DAY
Initial user interviews.
Test Bluetooth iBeacons.
Evaluate NFC + Geofencing within app.
Test tactile solutions
Conduct user field tests.
Map potential deployment locations.
Polish interface.

We envision the future of New York’s transportation system to be accessible to all.

Thank You!