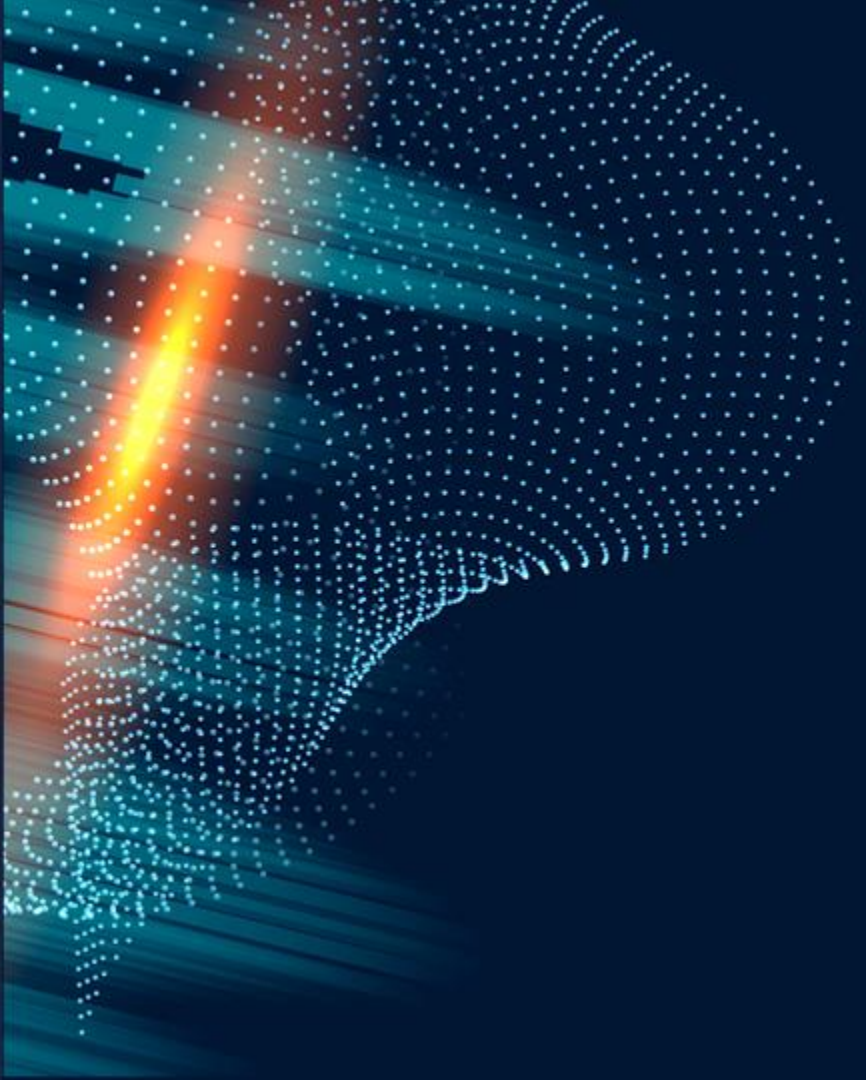
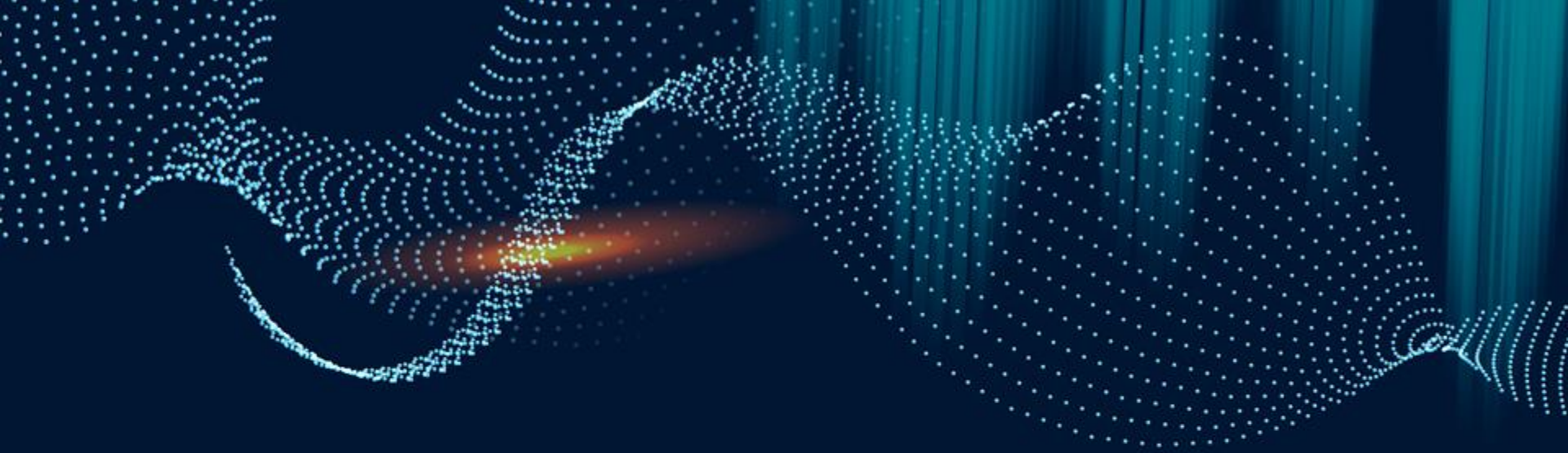
BUDDYSPECS

SMART GLASSES SOFTWARE FOR THE VISUALLY IMPAIRED

By Group 20: Charla McEachran-Morin, Westley Martin-Root, Adeife Olomola, and Cadence Greer



OUR DESIGN PROCESS



01 | EMPATHIZE

USER BENCHMARKING

We reviewed a few user solutions to see what kind of assistance the visually impaired found useful:

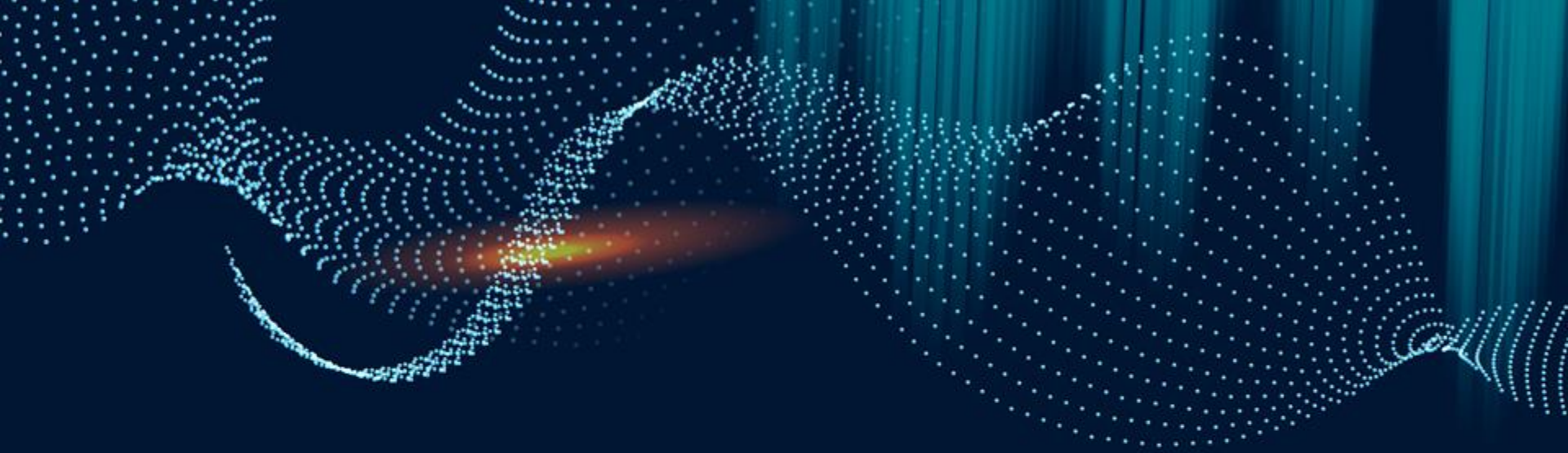
Guide Dogs

Long Canes

Assistance Apps

DESIGN CRITERIA

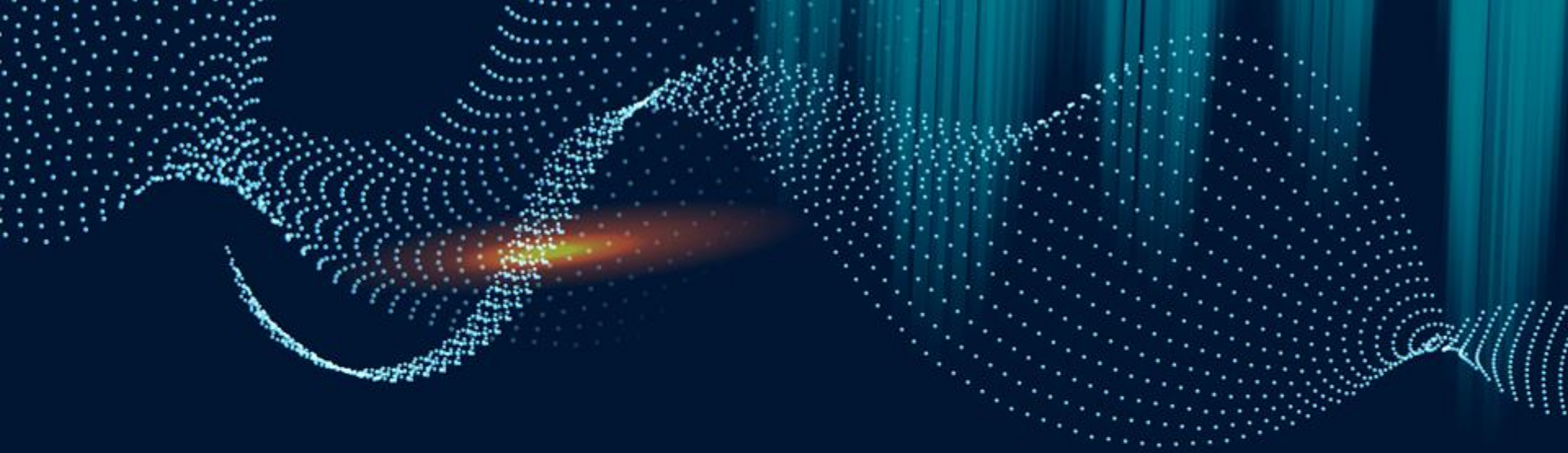
- 2 API's minimum
- Glasses are easy to use
- Software should use simple logic
- Good storage
- Leave room for improvement
- Autonomous
- Clear Communication
- Easy user input
- Clear warning & adequate response time
- Simplistic & minimal



02 DEFINE

Our problem statement:

Visually impaired individuals need a practical, modern device to help them navigate independently throughout their daily life. The solution needs to leverage Shabodi's NetAware API's.



03 IDEATE/ PROTOTYPE

Due to the iterative nature of these sections, we will be covering them together

BRAINSTORMING

NAVIGATION

Navigate around urban areas with directions/assistance from the glasses.

FINE-ASSISTANCE

e.g., reading signage/books, clean up a spill, etc.

SMARTPHONE INTEGRATION

Interact with the glasses through a smartphone app

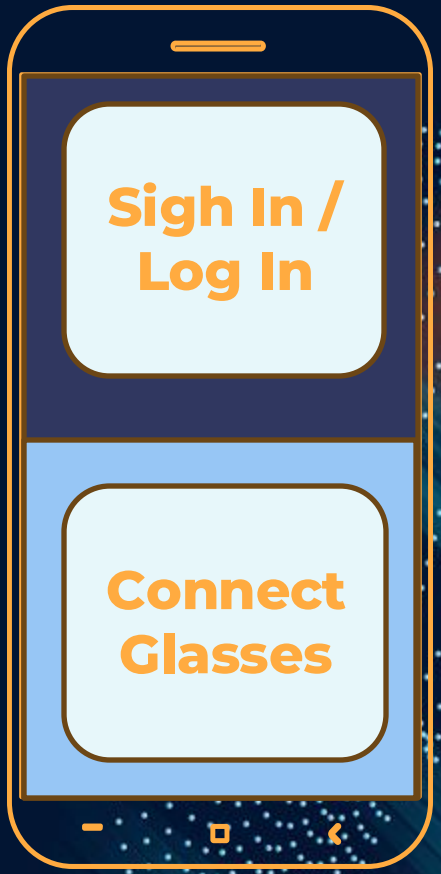
MODEL ONE

Smart glasses and
Smartphone integration

Simple and Legible

High Contrast

- Voice commands both ways
- Location / directions
- Object detection / Haptic feedback
- Connected to phone applications
- AI assistant



OUR FEEDBACK from Shabodi

- The phone integration is useful to support the processing power of the glasses
- Your idea is too complex; focus on minimum viable product

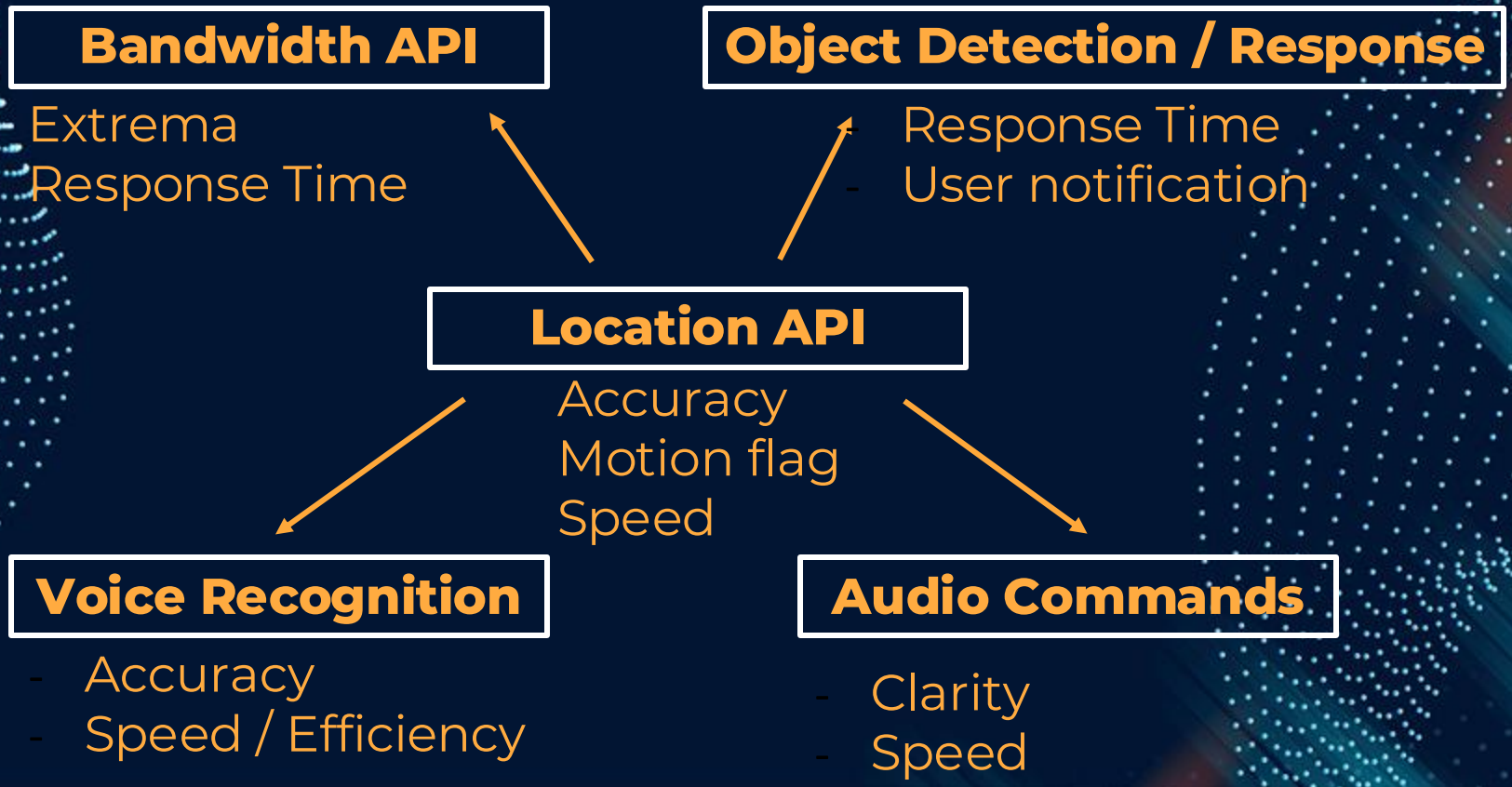
OUR RESPONSE: MODEL 2

To focus on the MVP, we chose to emphasize the phones capability to offload processing power from the glasses

TESTING

Prototype 1: Location API Integration Logic Testing

Backend Testing



OUR RESULT

Here is a demo of our design

WHAT'S LEFT?

The Final Prototype

Final testing and demonstrations for design day.

Wrapping Up

Compiling a user manual and marketing information.

The Future of BuddySpecs

Continued work with Shabodi on enhancing the product and its unique features.

WHAT DID WE LEARN

We learned how generative AI is a fantastic tool for prototyping.
We learned that playing off the strengths of people in the group made finishing tasks easier.
Having a creative mindset is very important.
In future, we would opt to "go outside of the box" when producing ideas.
We would have also embraced our empathize section more and tried to find a more unique solution.

ANY QUESTIONS?

THANKS!

Sources we used:

- Shabodi developer docs
- ChatGPT

CREDITS: This presentation template was created by Slidesgo, including icons by Flaticon, and infographics & images by Freepik.