

HERE-U

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ANDREA

HR Assistant

DHH: PROFOUNDLY DEAF WITH
TWO COCHLEAR IMPLANTS

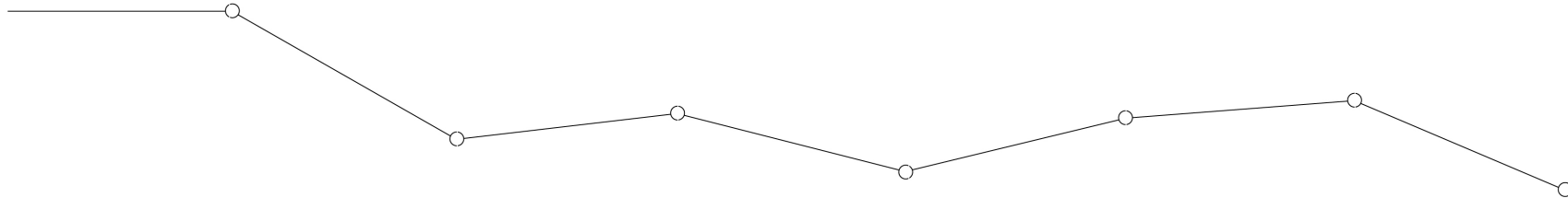
USER JOURNEY MAP - ANDREA

PROFOUNDLY DEAF

	12:00	12:02	12:30	1:15	2:00	2:30	2:35
TIME	Rides elevator downstairs with two coworkers	Orders food at a restaurant and eats her lunch with friends	Use the stairs to walk off her meal	Conducts a an in-person one-on-one interview for the HR department	Listening to a fire drill announcement while walking back to her desk	Files outside with the rest of her office when fire alarm goes off	Makes small talk with HR department while they wait on the sidewalk for the fire drill to be over
PAIN POINT(S)		Server speaks quickly and it is difficult for Andrea to read lips and understand her with the loud restaurant background noise	The stairwell is too echoey for Andrea to participate in conversation	Job candidate speaks quickly and mumbles her words, so Andrea has to the woman to repeat herself several times	Cannot understand the garbled voice and has to ask coworker what is going on		Has difficulty hearing the discussion and determining who is talking
MOOD	Content	Frustrated	Anxious	Uncomfortable	Confused	Tired	Irritated

EXPERIENCE

POSTIVE

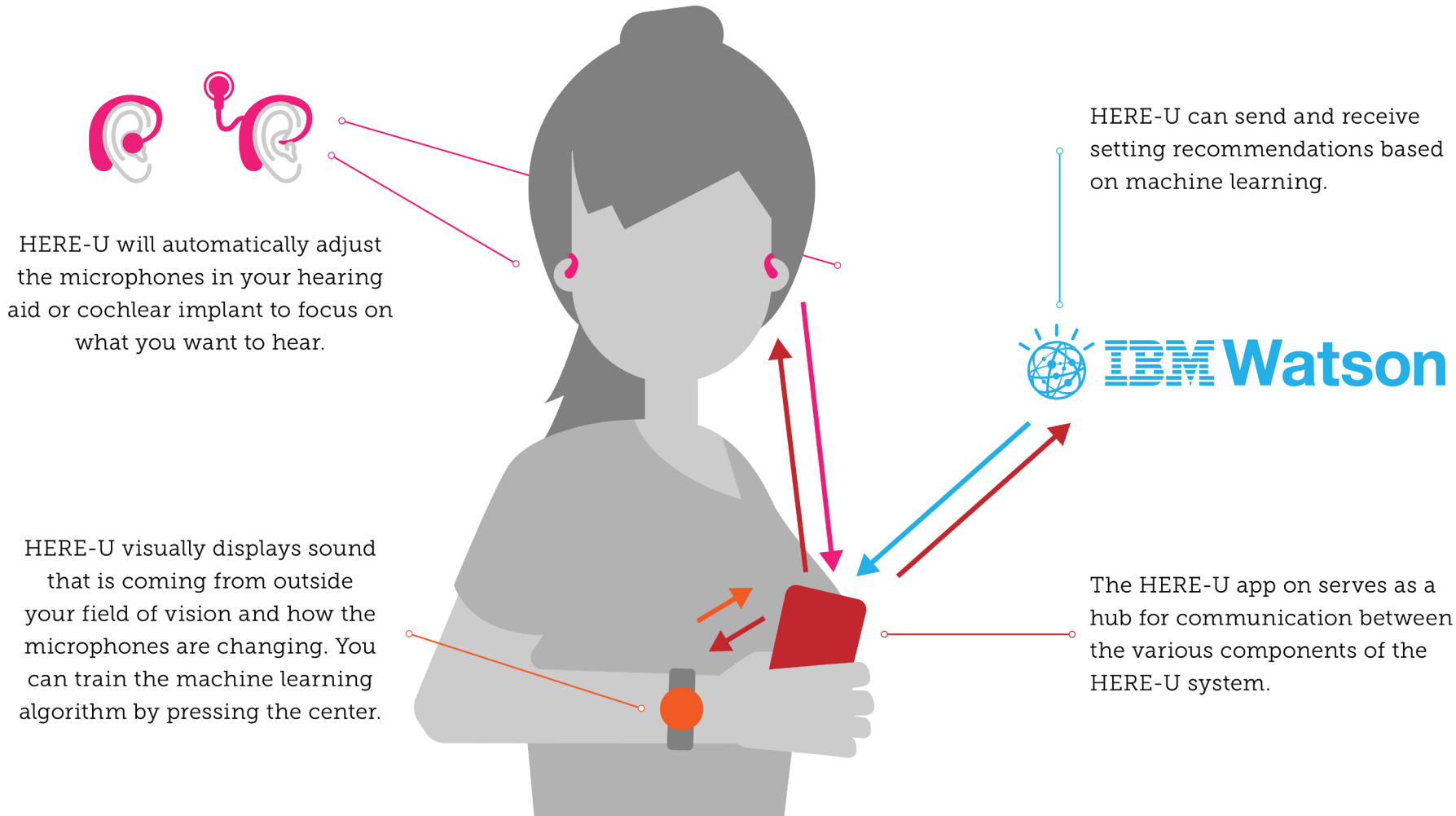


NEGATIVE

USER EXPERIENCE GOALS

- **Adapts to conversational settings**
- **Improves conversational experience with friends and colleagues**
- **Strengthens social and professional relationships**

*Andrea is going into work. She plans to have
to lunch with her coworkers today and hopes
that the restaurant is not too noisy...*



HERE-U will automatically adjust the microphones in your hearing aid or cochlear implant to focus on what you want to hear.

HERE-U can send and receive setting recommendations based on machine learning.



HERE-U visually displays sound that is coming from outside your field of vision and how the microphones are changing. You can train the machine learning algorithm by pressing the center.

The HERE-U app on serves as a hub for communication between the various components of the HERE-U system.

A close-up photograph of a person's hand holding a menu. The hand is wearing a blue haptic watch with a circular face and a gold bracelet with a floral pattern. The menu is open to a page titled 'Broth Bowls' and 'Pasta & Mac'. The background is a red surface with a patterned napkin and silverware. The text 'HAPTIC FEEDBACK' is overlaid on the hand.

HAPTIC FEEDBACK

HERE-U interface vibrates to alert users when someone is approaching or speaking to them



PORTRAIT BLUR

*Sensors activate shotgun microphone
in cochlears and hearing aids to reduce
background noise & pick up individual voice*



BUBBLE BLUR

*Identifies many-to-one conversations
and uses a cardioid microphone to reduce
background noise around the speakers*

ANATOMY OF A HERE-U

UNIQUE FEATURES

Display

AMOLED screen with OLED Panel.

Haptic

Vibrates to alert them when someone is speaking to them. Sustained vibration is when someone is approaching them.

Sensors

Uses wireless motion detector sensors. These sensors are based on infrared light, ultrasound, or microwave/radar technology. We use sensors that do not identify individuals but detects human presence. The data collected by the sensors is yours.

Affordable

HERE-U has bluetooth capabilities which is the most energy efficient means of streaming sound and it's adaptive to any device. HERE-U also has an app that is adaptable to the Apple Watch.

USAGE



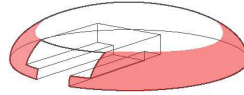
Magnetic Clasp

Clips Anywhere!
(ex: clips onto hair ties, shirt sleeve)

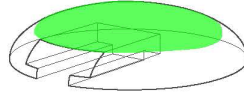


Keyfob

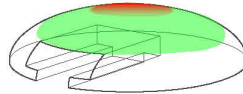
INTERACTION SAFE AREA



Caborem volorum quam facepe labore, ne sandae occus, ea que rest quate ditem asim quunt.

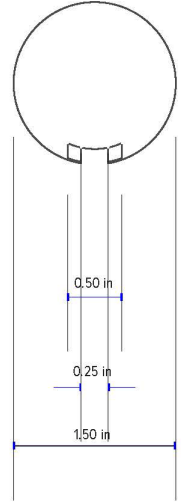
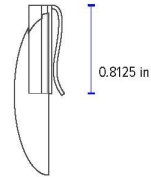
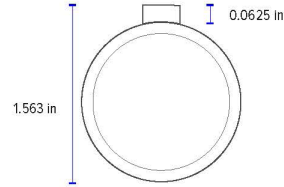


Display Surface

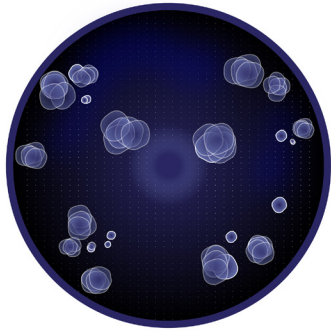


Safe area and active touch zone for flagging (training ML).

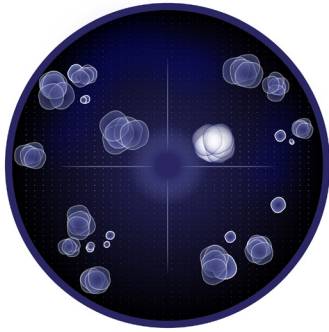
DIMENSIONS



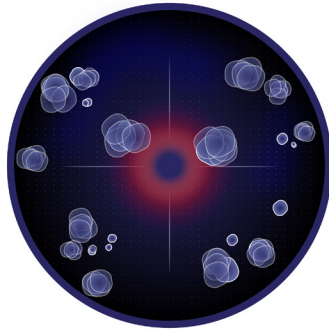
Weight: 1 ounce



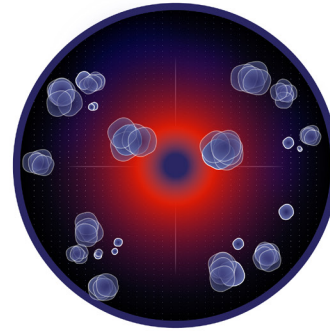
Interface - no talking,
no blurs



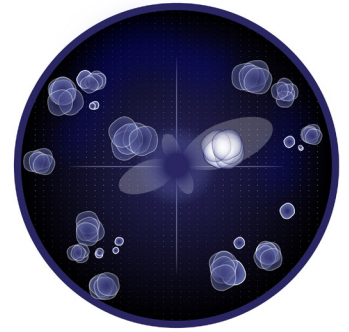
Friend to right speaking



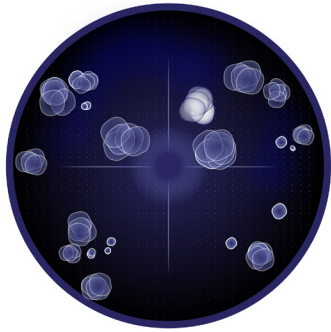
Moment flagged -
beginning



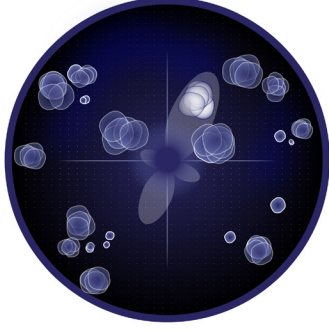
Moment flagged -
progression



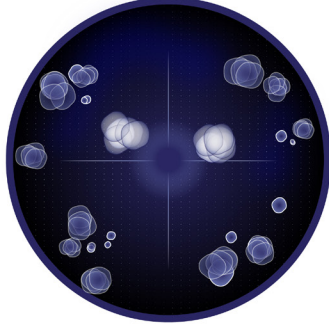
Side Blur activated



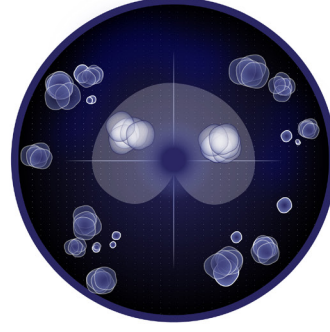
Waitress speaking - no
blurs



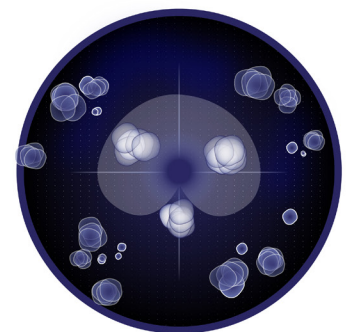
Portrait blur activated



Many-to-one conversation



Bubble Blur activated



Bubble Blur activated -
sustained vibration feedback

DIAGRAM OF STATES

SCALABILITY

- **Facilitates in-person conversation in various settings**
- **Provides data for noise level ratings on multiple review sites**
- **Increases awareness of DHH users in business environments**

USE OF MACHINE LEARNING

- **Algorithm learns from users' input and modifies its functionality to optimize the system**
- **Eventually, users will no longer have to train HERE-U**

REFLECTION

- **How could HERE-U function in other settings, like work meetings?**
- **How could HERE-U change the way public places (restaurants, for example) accommodate those who are DHH?**