

A person with their back to the camera, looking out over a city street at night. The scene is overlaid with a blue gradient. The person is wearing a dark, textured jacket. In the background, city buildings and streetlights are visible, though blurred.

Dreamwaves

Help blind people see the world through their ears.

dreamwaves.io

Orientation is a fundamental challenge...

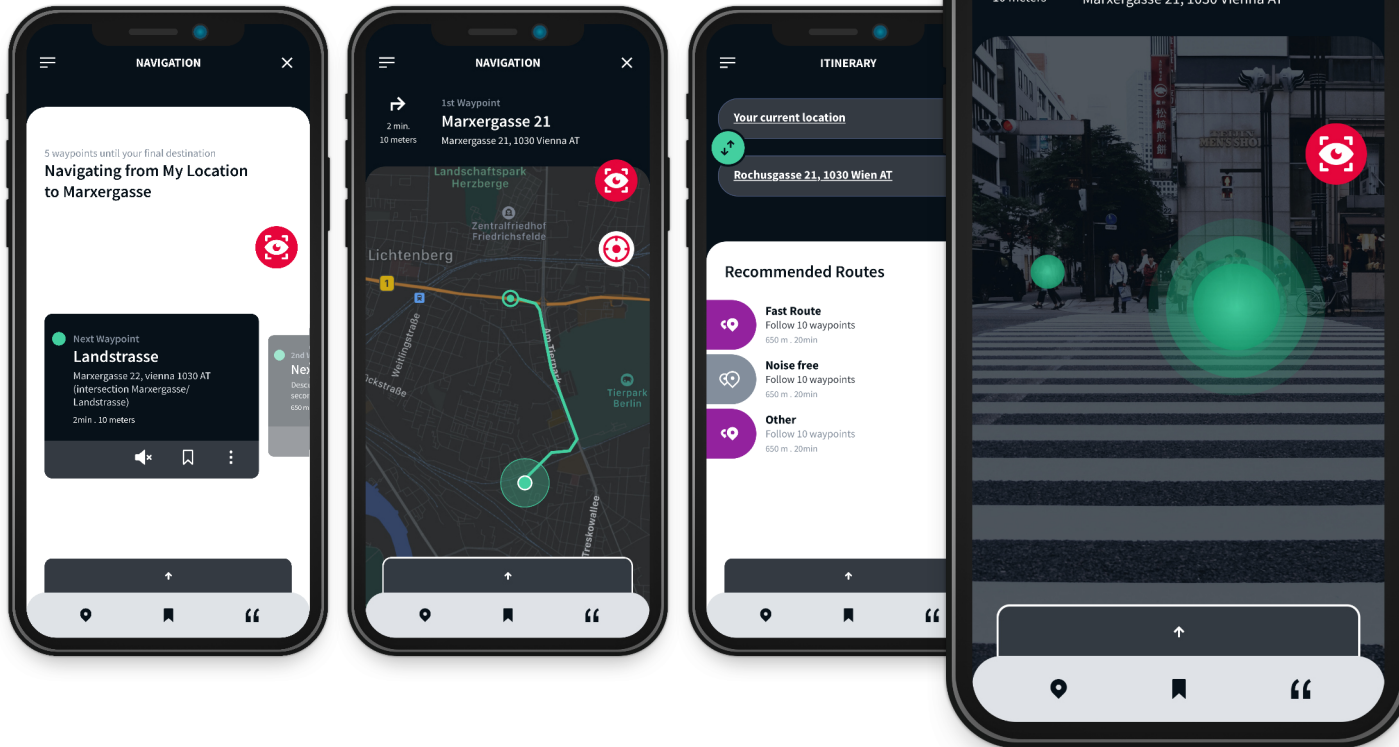


... and especially hard in specific situations



Our Solution

Intuitive AR Navigation App



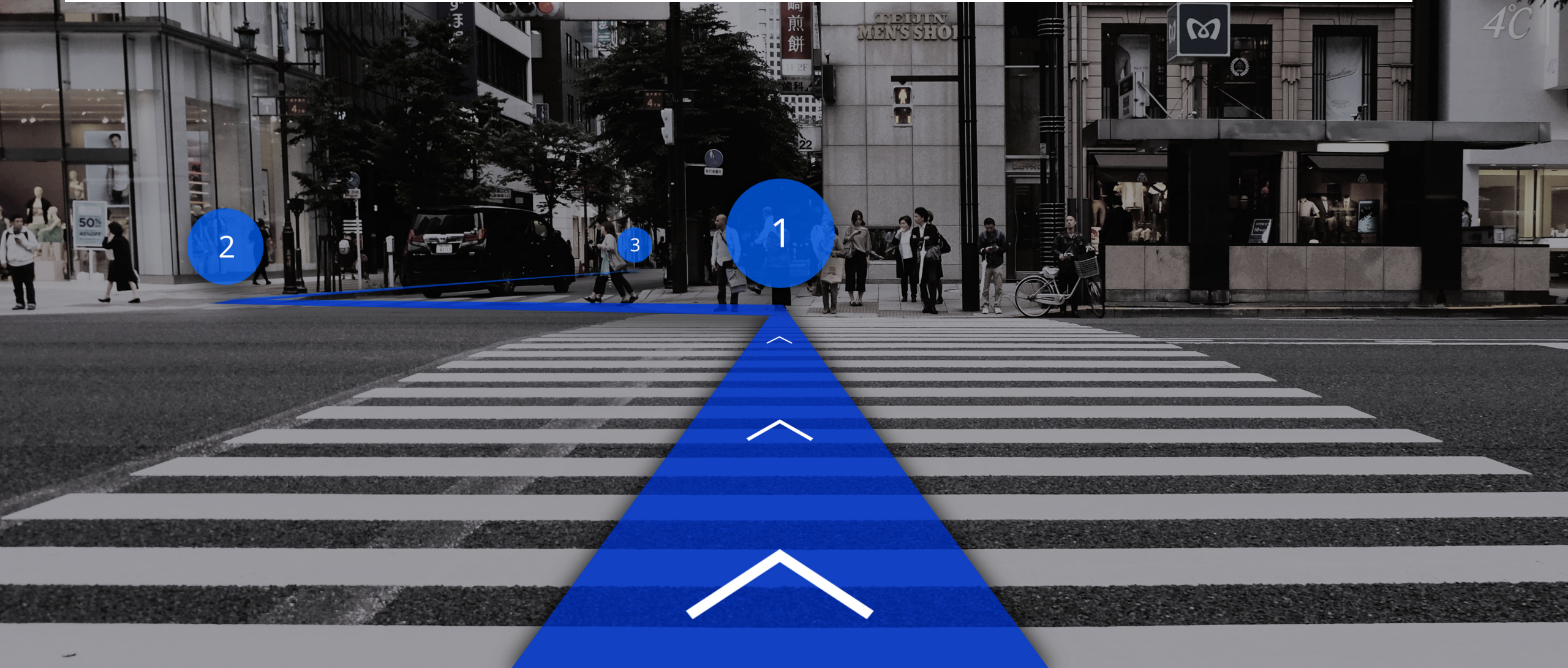
Bose AR Frames



Sony InEar Duo

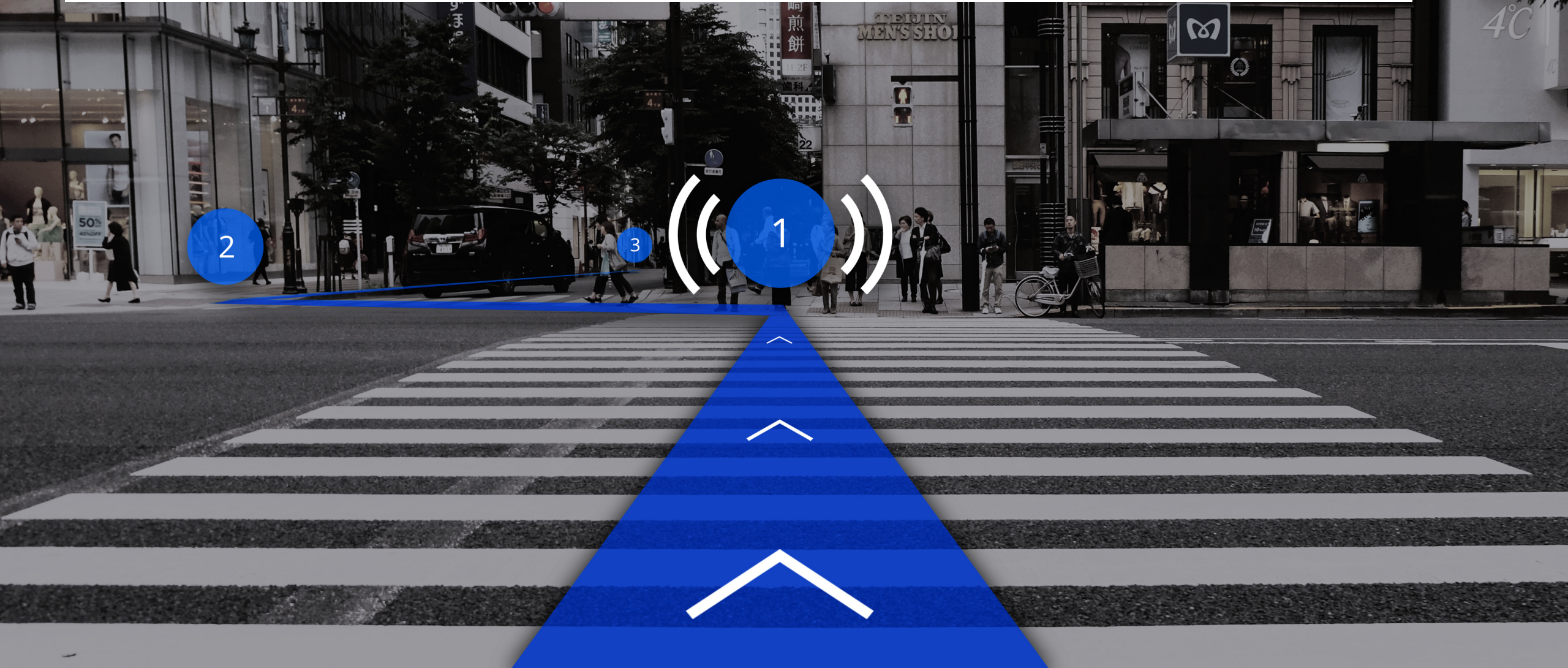
Audio Augmented Reality

Virtual sounds at specific locations embedded in the real world



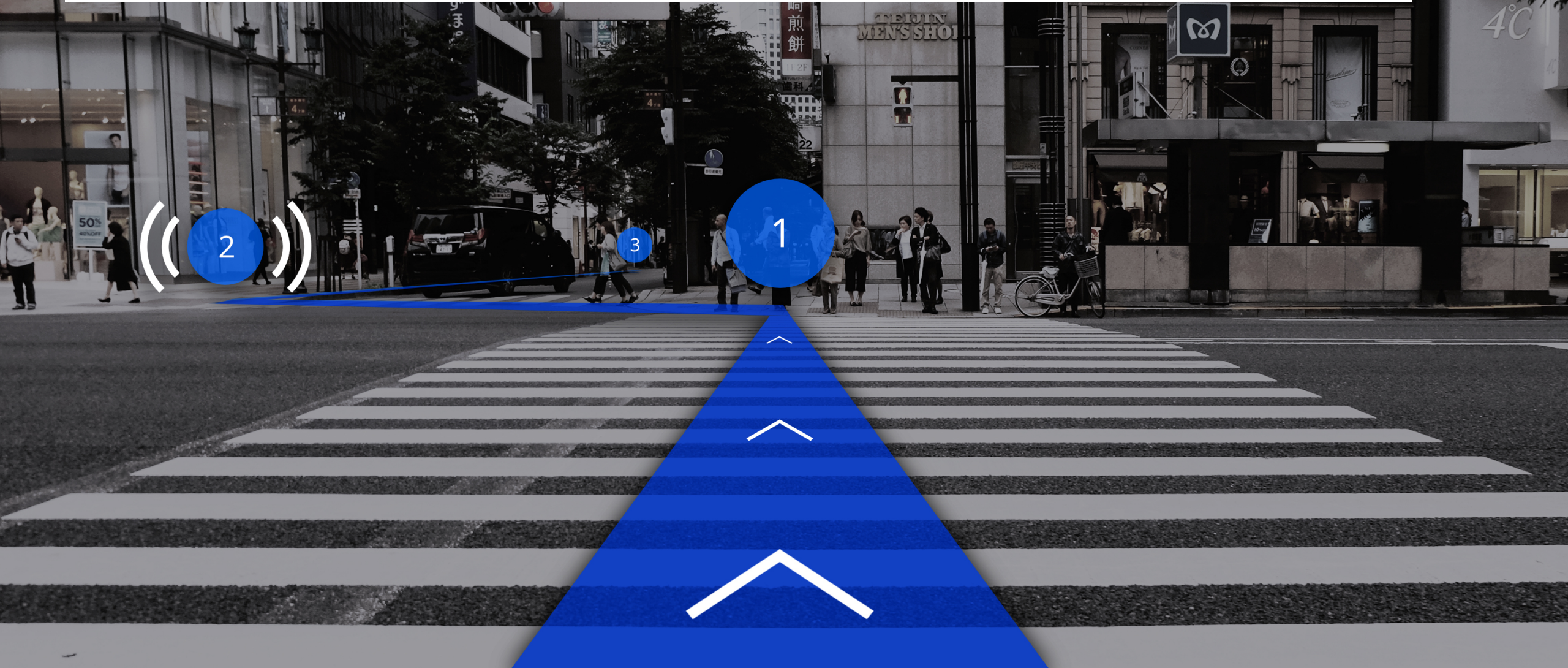
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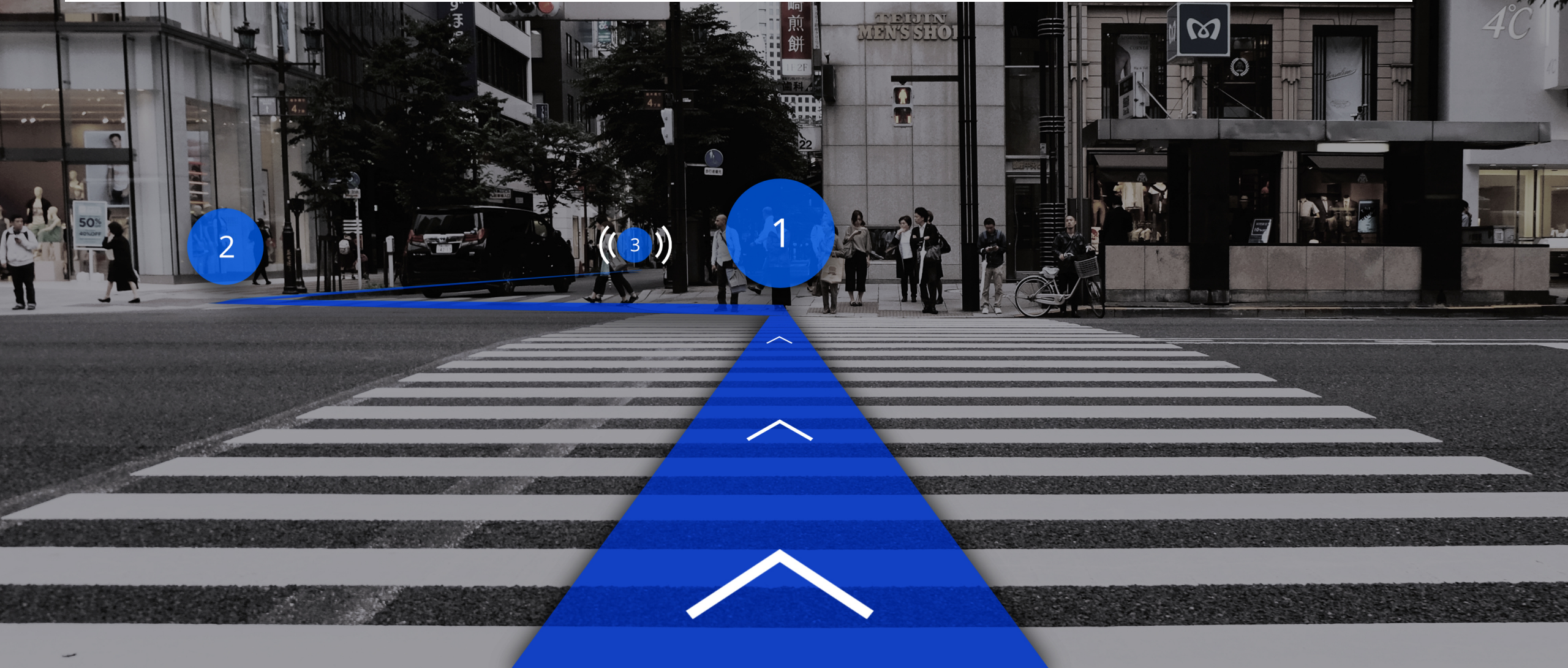
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Audio Augmented Reality

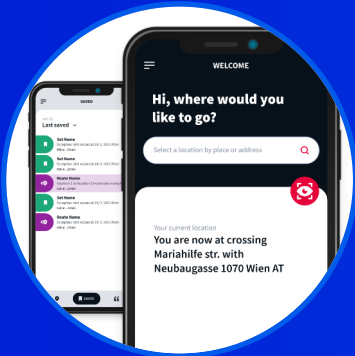
Virtual sounds at specific locations embedded in the real world



Audio Augmented Reality

Why now?

“The platform for audio AR is booming”



SMARTPHONE MOBILE AR PLATFORM

Increasing computing power at affordable price

Freely available AR software SDKs (ARCore/ARKit)

Better sensors and cameras



HEARABLES AUDIO AR DISPLAY

Integrated sensors for head motion tracking

Low power bluetooth

Easy to wear, socially accepted

The ideal audio augmented reality platform is already available now!

MVP

Mobility independence



MULTI MODAL ROUTING

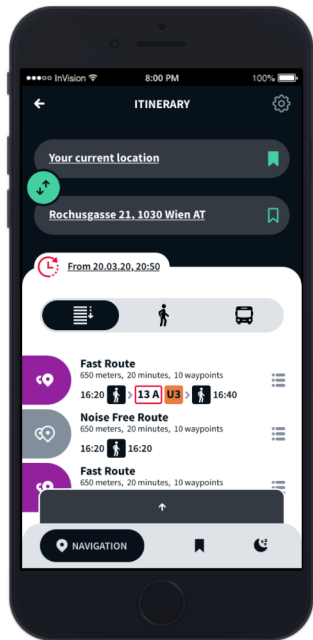


ON/OUT BOARDING ASSISTANCE

ROLL-OUT AND EVALUATION

Public transport routing

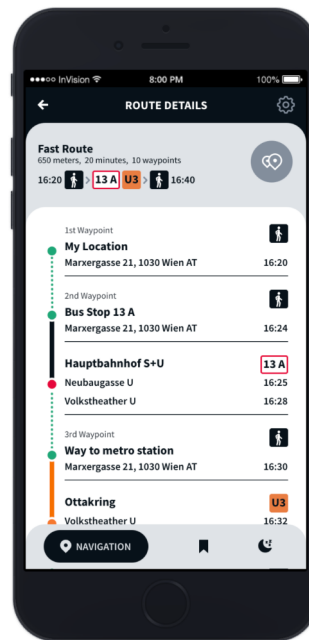
UI Integration



ITINERARY RESULTS

FILTER BETWEEN PT AND PEDESTRIAN

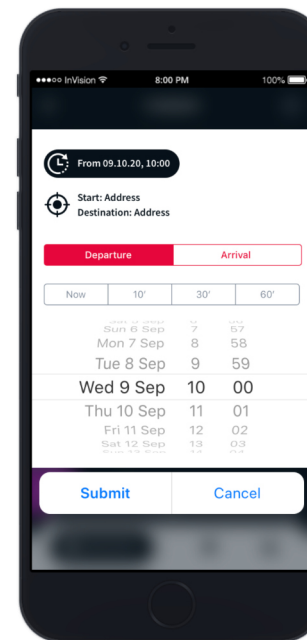
QUICK OVERVIEW OF ROUTING POSSIBILITIES



ROUTE DETAILS

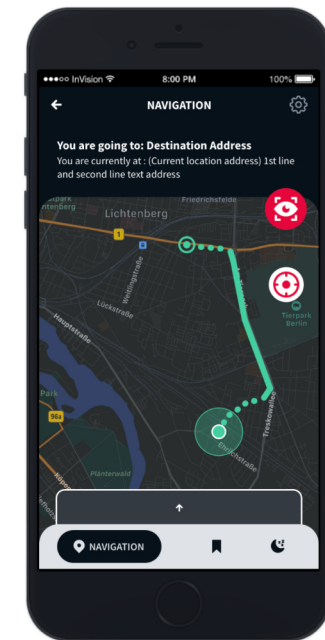
DETAILED OVERVIEW OF ROUTE LEGS

SAVE ROUTE OPTION



SCHEDULE ROUTE

PREPLAN ITINERARY OPTIONS



NAVIGATION MAP VIEW

DISPLAY PEDESTRIAN AND PT ROUTE SECTIONS

Offline planning

TRIP PLANNER

SAVED



Greiseneckergasse, 1200 Brigittenau, Au



Marxergasse 24, 1030 Landstraße, Austr



From Sep 7th 2020, 18:19

sort by

All Suggested Routes ▾



Transit Route 1

1.44 km, 28 minutes, 10 waypoints

19:14 19:42



Transit Route 2

710 meters, 29 minutes, 8 waypoints

19:31 20:00



Walking Route

3.66 km, 44 minutes, 16 waypoints

18:21 19:04



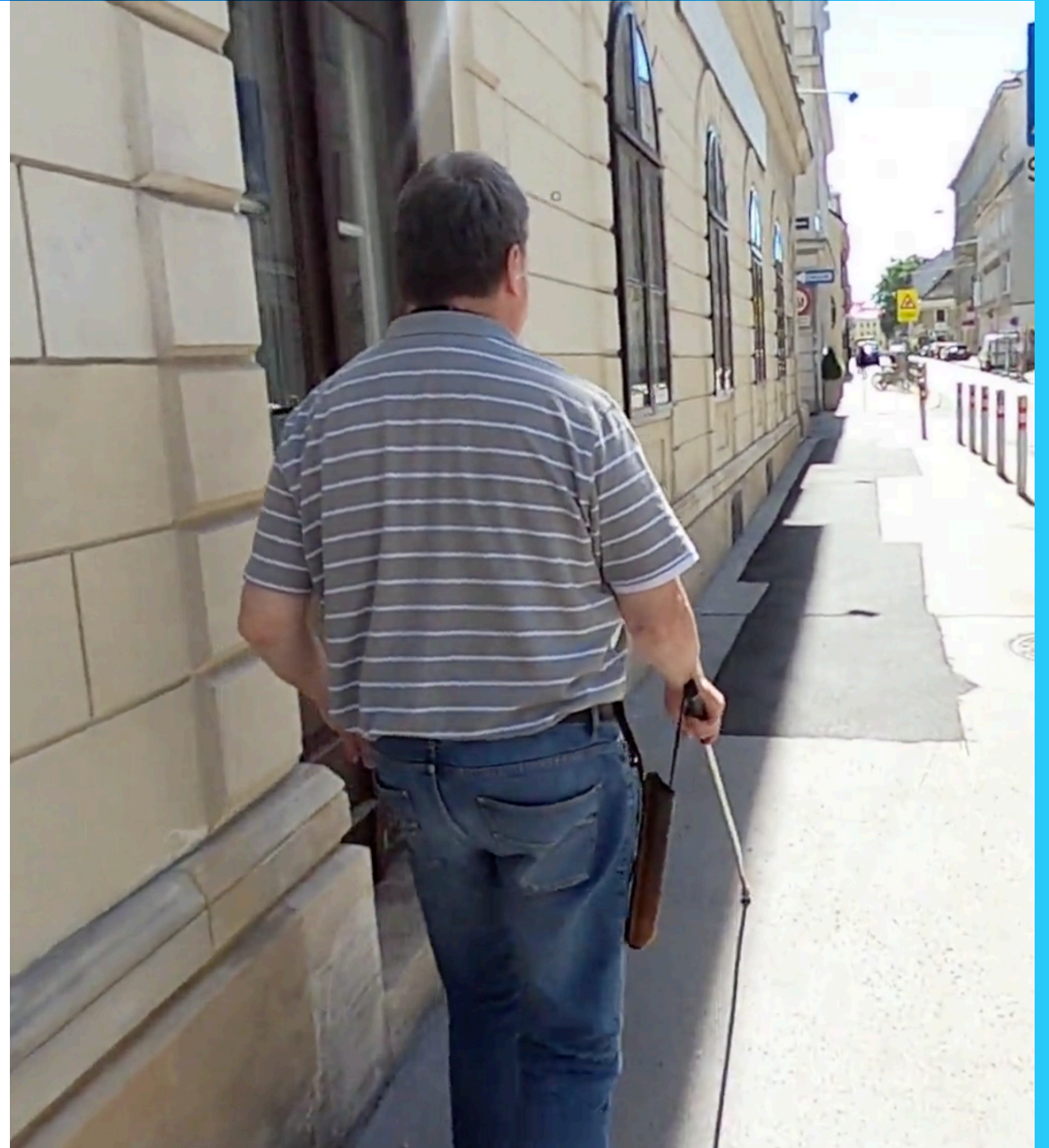
MVP demo

Roll-out evaluation

ACQUIRED AND PROCESSED IMAGES

INVITED SIGHTED BETA TESTERS

OBSERVATION WORKSHOPS



Observation workshops

7 FULLY BLIND, 1 VISUALLY IMPAIRED

1 EASY ROUTE TO UNDERSTAND THE APP

1 COMPLICATED ROUTE FOR ACTUAL TEST

OBSERVING, TAKING NOTES AND FILMED

INTERVENING AS LESS AS POSSIBLE



Results

Test
example

Results

6 COMPLETED THE ROUTES EASILY

"It's a completely different paradigm of navigation"

"We get a constant feedback of where to go"

"It's a bit like seeing"

SAFETY

CONFIDENCE

SPEED

FUN

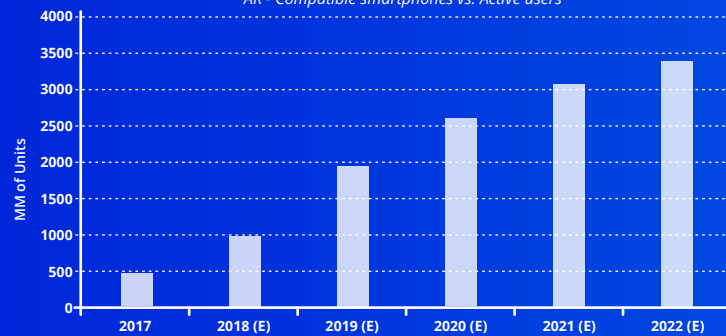
Market Size

People with AR capable smartphones & hearables



ARCORE + ARKIT INSTALLED BASE

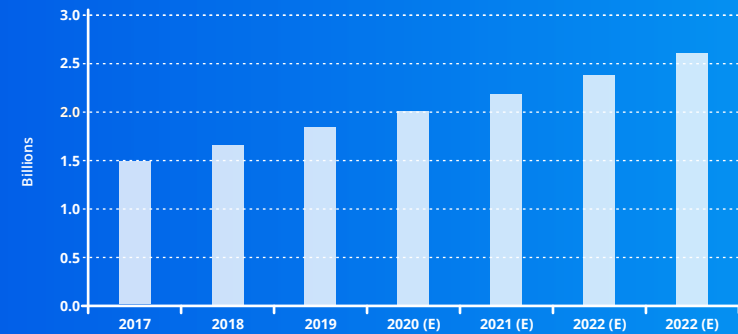
AR - Compatible smartphones vs. Active users



Source: ARtillery Intelligence, 2018
(<https://arinsider.co/2018/12/27/990-million-arkit-arcore-smartphones-in-the-wild/>)



NUMBER OF HEARABLES SOLD



Source: The hearables report, Nick Hunn, WiFore Consulting, London, U.K.; January 2020; Download at: <http://bit.ly/hearables2025>

Market Size

Blind or moderate to severe visual impaired by region

WORLD WIDE
250M

EUROPE
20M

UK
1.36M

DACH
1.1M

AUSTRIA
100K

Source: Bourne RRA, Flaxman SR, Braithwaite T, et al, on behalf of the Vision Loss Expert Group. Magnitude, temporal trends, and projections of the global prevalence of blindness and distance and near vision impairment: a systematic review and meta-analysis. Lancet Glob Health 2017

Revenue

Subscription Plan

FREE

€ 0

Spatial Audio
Basic Navigation Features
5 Routes per Month

BASIC

MONTHLY

€ 5,99

Spatial Audio
Basic Navigation Features
Unlimited Routes

STANDARD

MONTHLY

€ 19,99

Spatial Audio
Basic Navigation Features
Unlimited Routes
Object Detection & Warnings

ADVANCED

MONTHLY

€ 69,99

Spatial Audio
Basic Navigation Features
Unlimited Routes
Object Detection & Warnings
In-App Live Video Support

Potential Revenue Scenarios

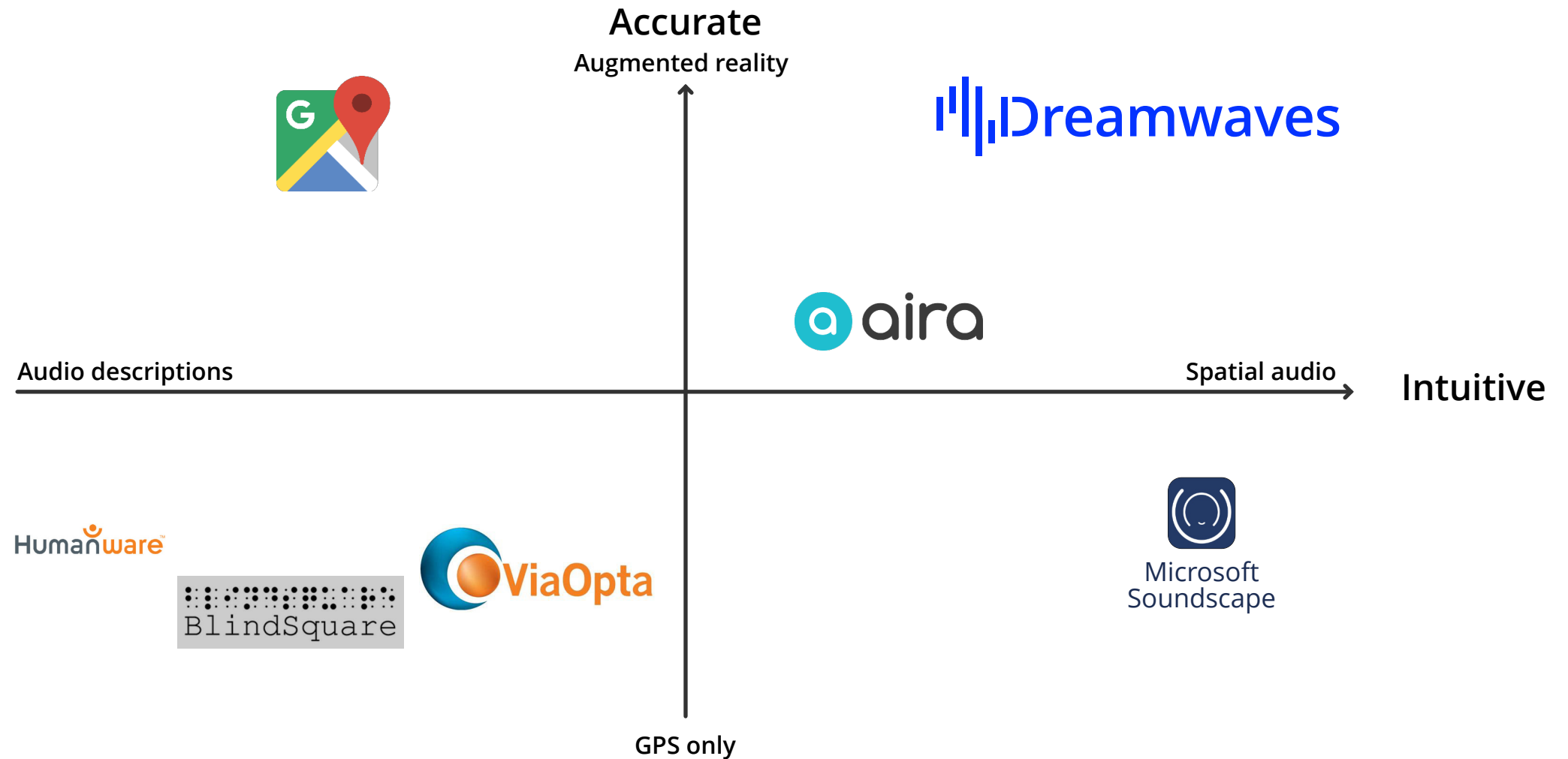
Euros per year

BLIND

40M

EUROPE

Competition Landscape



Team

Intuitive & advanced technology can make a difference in people's lives.



HUGO FURTADO
CEO

PhD in medical Augmented Reality
Software Developer @ **Altitude Software** (PT)
Researcher @ **CERN** (CH)
Marie Curie PhD Research Fellow (SLO)
Post-Doc @ **Medical University of Vienna** (AT)



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PhD in computer vision
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Post-Doc
Technical Lead
Scientific Co-PI
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Eye Research Institute (USA)



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Degree in Communication &
multimedia design
Communication design @
Bookpaper Design (PT)
addsolutions (PT)
studio novo (AT)
E2 Communications GmbH (AT)



ALESSANDRO MULLONI
Mobile Developer

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PhD @ **TUGraz** (AT)
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Freelancer Mobile AR apps



ELKE MATHEISS
Usability & Accessibility Community Management

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Usability Scientist @ **AIT** (AT)
Freelancer in Data Science



HARRIET SMITH
Biology studies
Co-founder, Movimento **Transformers** (PT)
Freelance translator (PT, BE, AT)
English teacher @ **Show Me The World** (AT)
Community manager @ **New Austrian Coding School** (AT).



MIKEL ECHEGOYEN
Advisor, VP Business Development & Strategy at Tieto



MICHAEL BUSBOOM
Advisor, Marketing evaluation of product and technology



ACOUSTICS RESEARCH INSTITUTE
Research Scientific Partner Development
of Realistic Spatial Audio Engine

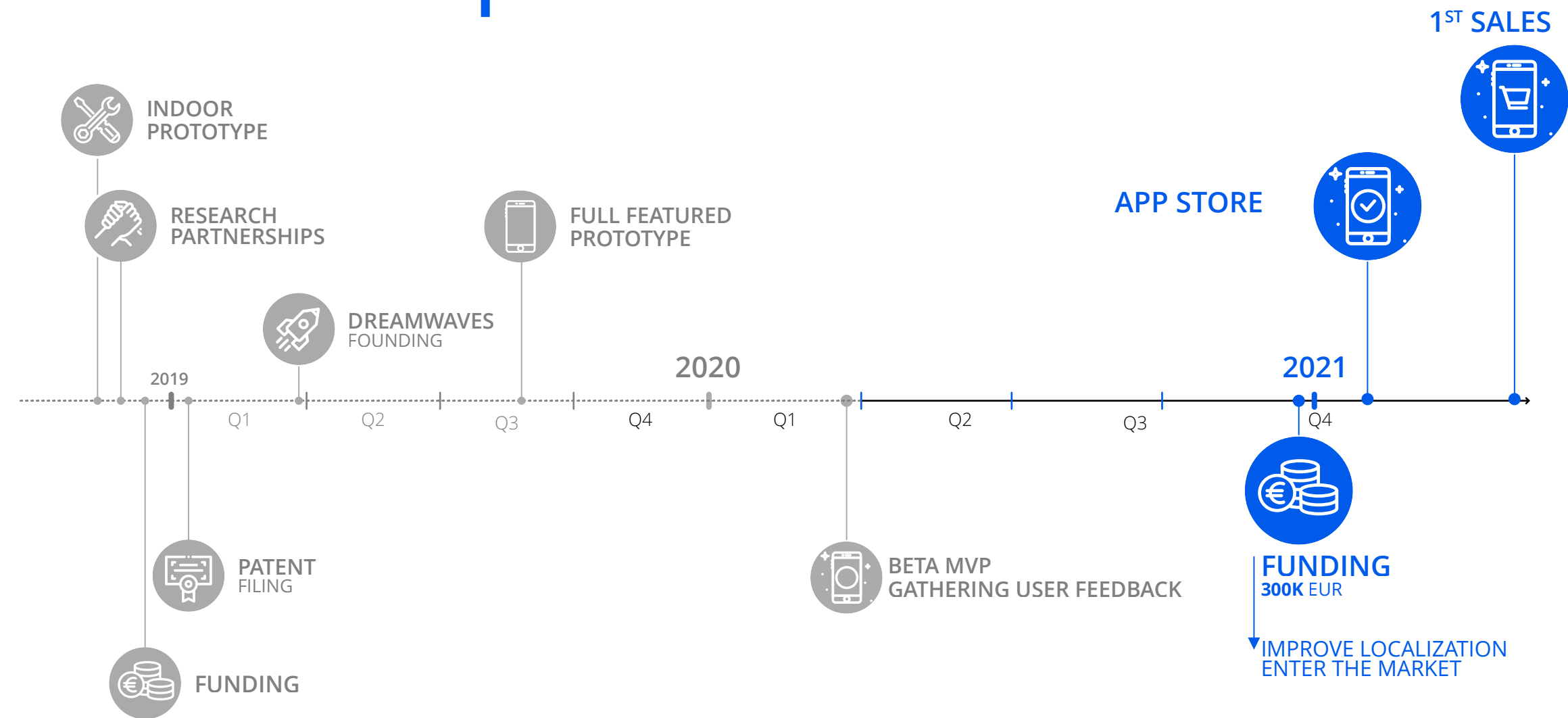


AUSTRIAN INSTITUTE OF TECHNOLOGY
User Experience Research



HILFSGEMEINSCHAFT
Partner for Technology Providing
Connection with the users

Our Next Steps





Help blind people see the world through their ears.

*“Let’s talk
about how!”*

Hugo Furtado CEO

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June 2020