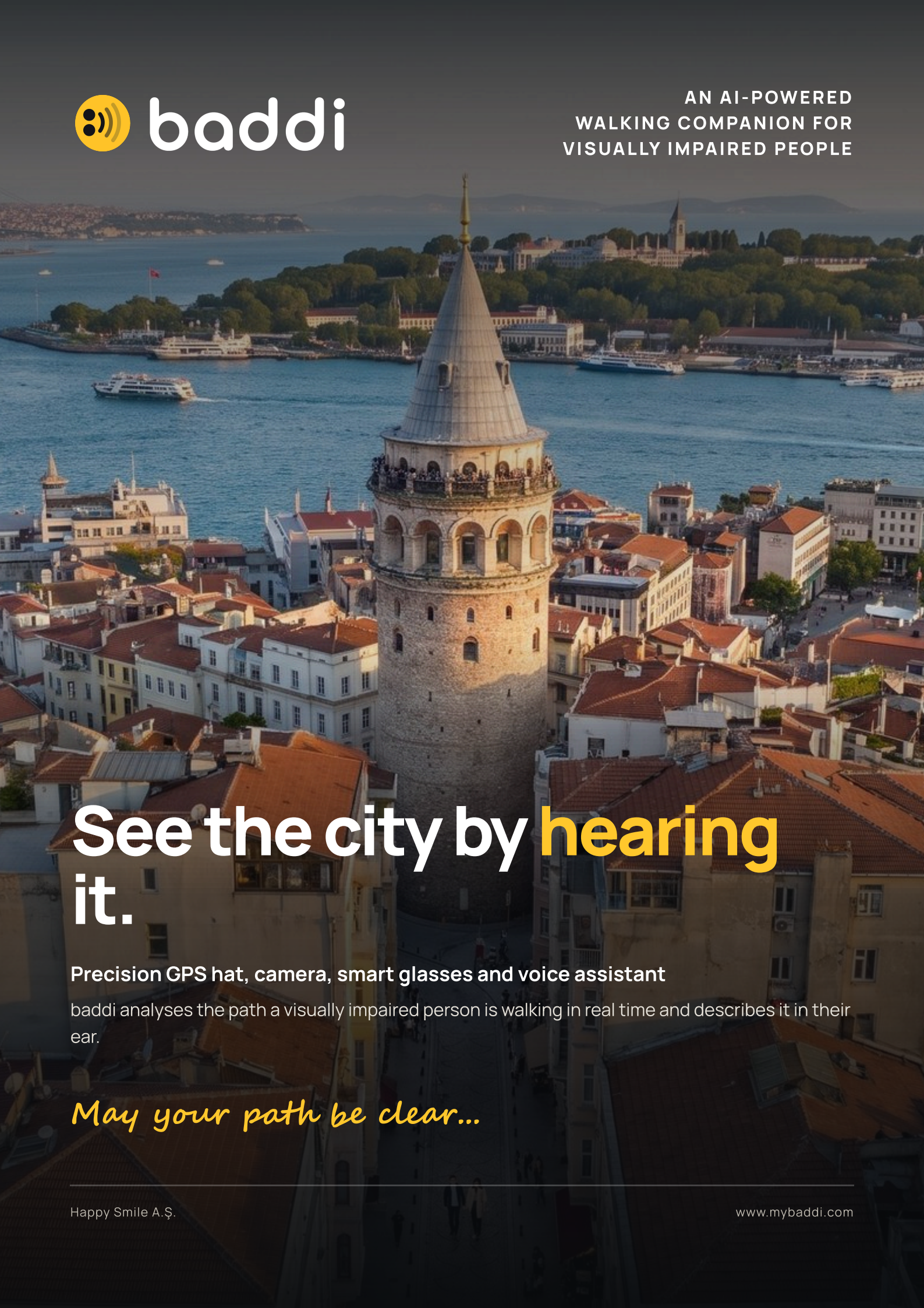
baddi

AN AI-POWERED
WALKING COMPANION FOR
VISUALLY IMPAIRED PEOPLE



See the city by hearing it.

Precision GPS hat, camera, smart glasses and voice assistant

baddi analyses the path a visually impaired person is walking in real time and describes it in their ear.

May your path be clear...



01 THE PROBLEM

43 million people worldwide cannot see. For them, the city is still an obstacle course.

43.3 million[1]
visually impaired people (world, 2020)

295 million[1]
people with moderate or severe vision impairment

61 million[1]
visually impaired people expected by 2050

30 million+[3]
visually impaired and partially sighted people in Europe

~1 million[4]
people with difficulty seeing in Türkiye

$411 billion[2]
annual global productivity cost of vision loss

The gap today's tools leave

A cane only checks the ground.
It cannot detect obstacles at waist or head height: scooter handlebars, signs, open shutters.

Phone GPS drifts by metres.
In a city, a 5–15 metre error means the wrong pavement or the wrong door for someone who cannot see.

Other apps only describe.
No single helper warns of obstacles instantly, finds the way and handles daily tasks.

Sources: (1) Bourne et al., The Lancet Global Health 9(2), 2021 — GBD 2020; (2) WHO, Blindness and vision impairment, 2026; (3) European Blind Union; (4) TurkStat Population and Housing Survey 2011, Ministry of Family and Social Services bulletin.

02 THE SOLUTION

Not an eye that sees, but a companion walking by your side.

baddi is a wearable system made of three parts.
All of them connect to the baddi app on the phone; the user simply speaks and listens.



01

Precision GPS hat

The satellite receiver on top of the hat does what phone GPS cannot: it fixes the position precisely. A light battery pack sits unobtrusively at the back.

02

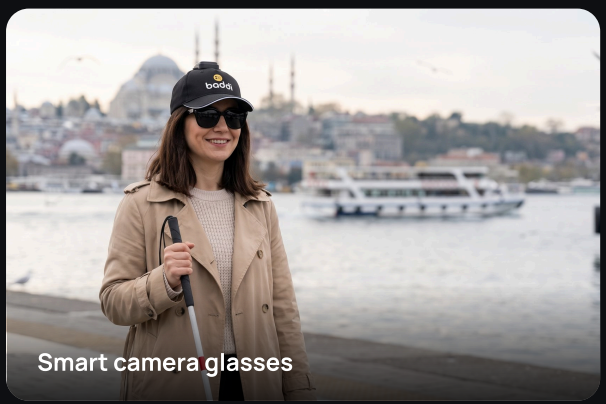
Camera: two options

The user chooses: baddi's smart camera glasses, or their own phone on a chest strap. Either one watches the path ahead continuously.

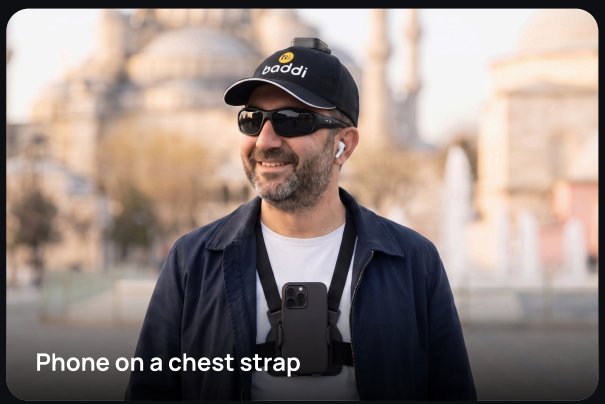
03

Earbuds and assistant

The voice assistant speaks through wireless earbuds; it warns, guides, reads, calls and writes. Hands and cane stay free.


Smart camera glasses

or



Phone on a chest strap

iOS and Android · 70+ languages including Turkish

On the street: sees the obstacle, finds the way.



01 Instant obstacle alerts

Depth sensing runs on the phone; it warns instantly, without a round trip to the cloud. A beep that quickens as you get closer conveys the distance.

“Stop! Obstacle ahead. A scooter, one metre.”



02 High-precision navigation

Precision GPS and routes calculated for visually impaired pedestrians. Turns are announced in steps, arrival in metres.

“In three steps, turn left.”



03 Kerbs and crossings

Announces kerbs, pedestrian crossings and main roads in advance. Safety principle: baddi never says “the way is clear, you can cross”.

“Wait at the kerb and listen for traffic.”



04 Works at night too

Precision GPS is just as accurate by night as by day; on phones with depth sensors, obstacle alerts keep working in the dark.

“Destination about twenty metres ahead.”

In daily life: reads, calls, stays by your side.



05 Medicine and text reading

Reads the QR code on a medicine box and says the drug's name and what it is for. Menus, letters, signs: it reads them all. It never suggests a dose and refers to the pharmacist.

"This is paracetamol 500 mg. Used for pain and fever."

06 Personal assistant

Reads emails and WhatsApp messages, writes replies by voice and makes calls. Weather, news, notes and reminders. Emails stay on the phone.

"Shall I send: "I'll come, I'm so glad.""





07 Help is one sentence away

Calls saved contacts and emergency numbers with a single sentence. The user is never alone.

"Calling your son."

08 Indoor routes

In a building visited often, such as a hospital, school or workplace, a route is recorded once; baddi then guides along it step by step.

"In five steps, the door on your right."



Speed-critical work on the device, meaning on the cloud.

What makes baddi original is that it combines three technologies into one voice experience. Vital alerts never wait for the internet; rich descriptions come from AI.

01 Sense

- Camera (glasses / phone)
- Depth: LiDAR or AI
- Precision GPS receiver
- Microphone

02 Process on device

- Instant obstacle & distance
- Kerb and crossing alerts
- Voice commands
- Position correction

03 Understand in cloud

- Scene and text understanding
- Conversation & assistant
- Accessible pedestrian routing
- Medicine information

04 Tell

- Natural voice in earbuds
- Distance-based beeps
- Short, imperative sentences

Why it is innovative

Hybrid architecture

Latency-critical obstacle detection on the device, interpretation in the cloud. The cloud alone lags 1.5–3 seconds; on the street, that means a collision.

Precise positioning

The precision GPS in the hat removes the metre-scale drift of phone GPS in navigation for visually impaired pedestrians.

Language designed for visually impaired users

Sentences rely only on what the user can perceive; the last word is always a clear instruction.

Privacy and safety

Personal emails are processed on the phone; the system never reassures that “the way is clear”.





05 MATURITY

Developed not in a lab, but on the streets of Istanbul.

baddi is a working prototype, developed through regular field tests under real conditions, by day and by night, on crowded streets.

2

platforms: iOS and Android

70+

languages supported, including Turkish

Working today

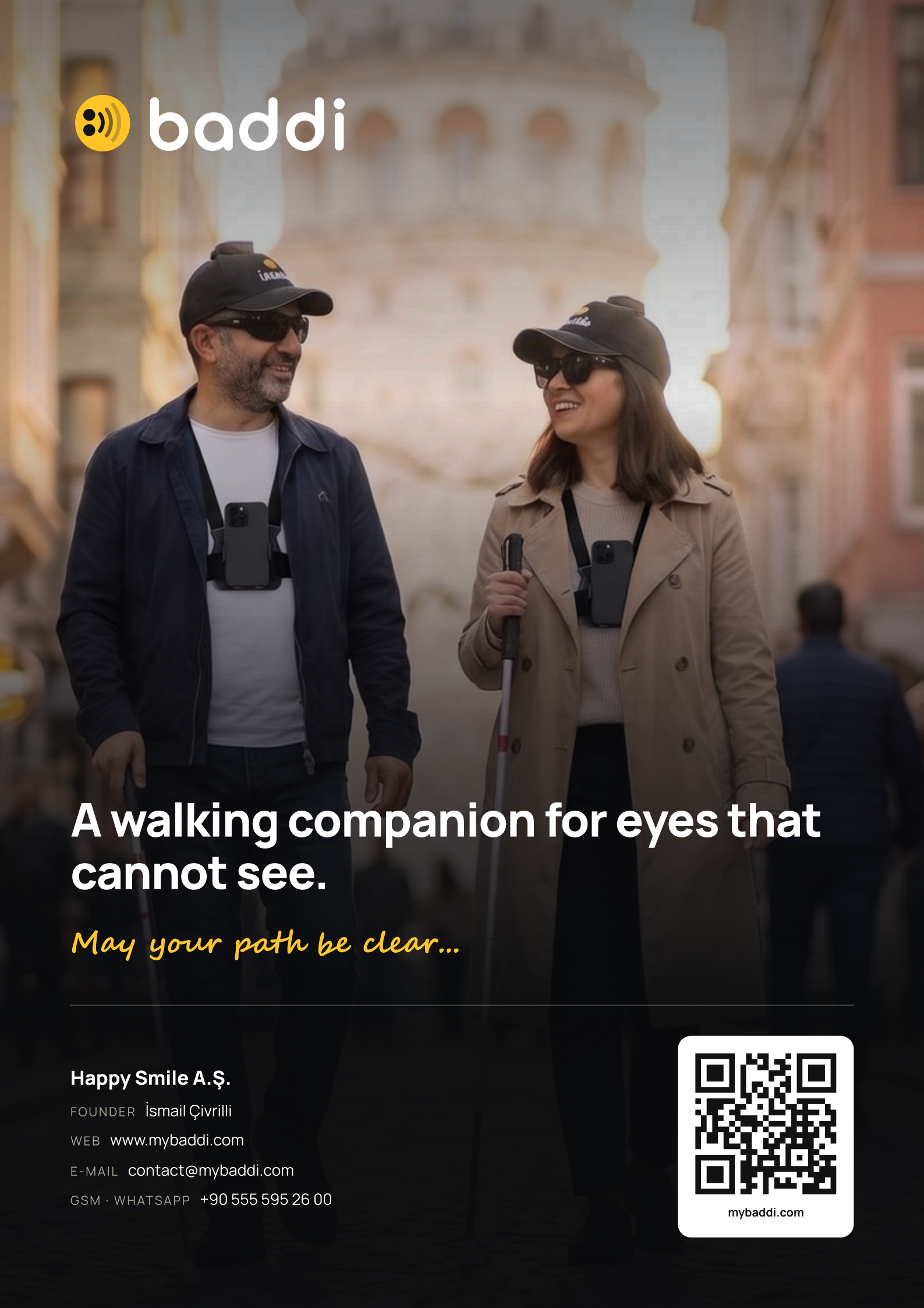
- On-device obstacle detection (iPhone LiDAR and Android single-camera depth)
- Precise positioning with the custom hat, including at night
- Routing with a visually-impaired-pedestrian profile and step-by-step guidance
- Voice assistant: email, messages, calls, weather, news, notes, reminders
- Medicine QR reading, emergency contacts, indoor route recording



06 ROADMAP

From prototype to a product everyone can use.

TODAY	NEXT	SCALE
Working prototype	**Pilot and expansion**	**Product and market**
iOS and Android app	Pilot group of visually impaired users	Mass-production hat design
Precision GPS hat	Smart camera glasses integration	Indoor route library for institutions
Obstacle alerts, navigation, assistant	Automatic fall detection and alerting	Public-sector and association partnerships
Field tests in Istanbul	Audiobooks and new assistant features	Entry into the global market



baddi

A walking companion for eyes that cannot see.

May your path be clear...

Happy Smile A.Ş.

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