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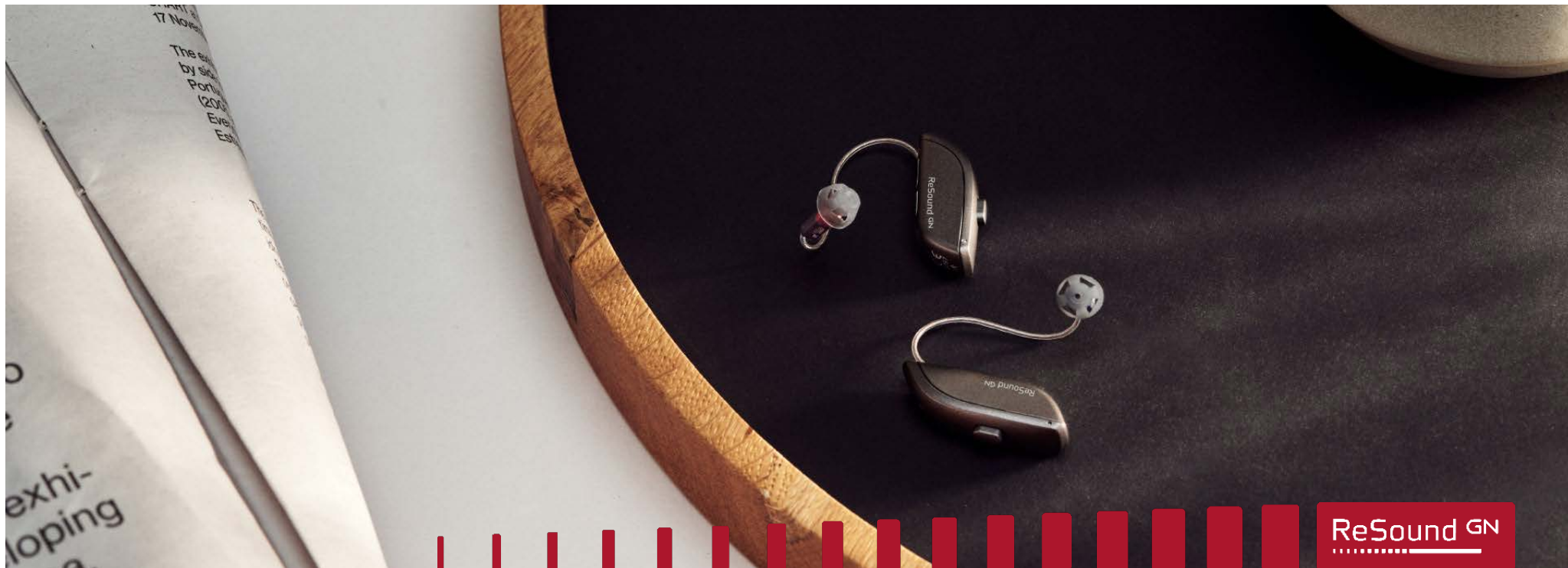
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ReSound GN

Directionality Designed to Support a Natural Sound Experience

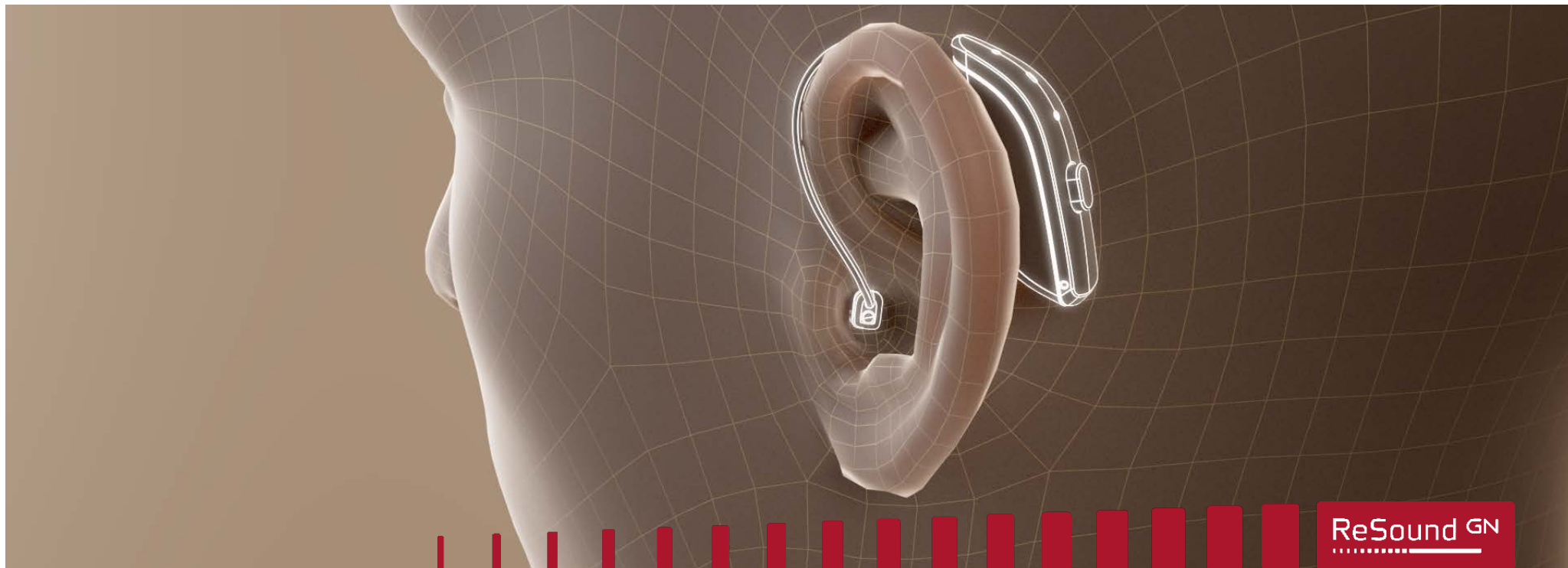
RESOUND GOVERNMENT SERVICES

GN Making Life Sound Better

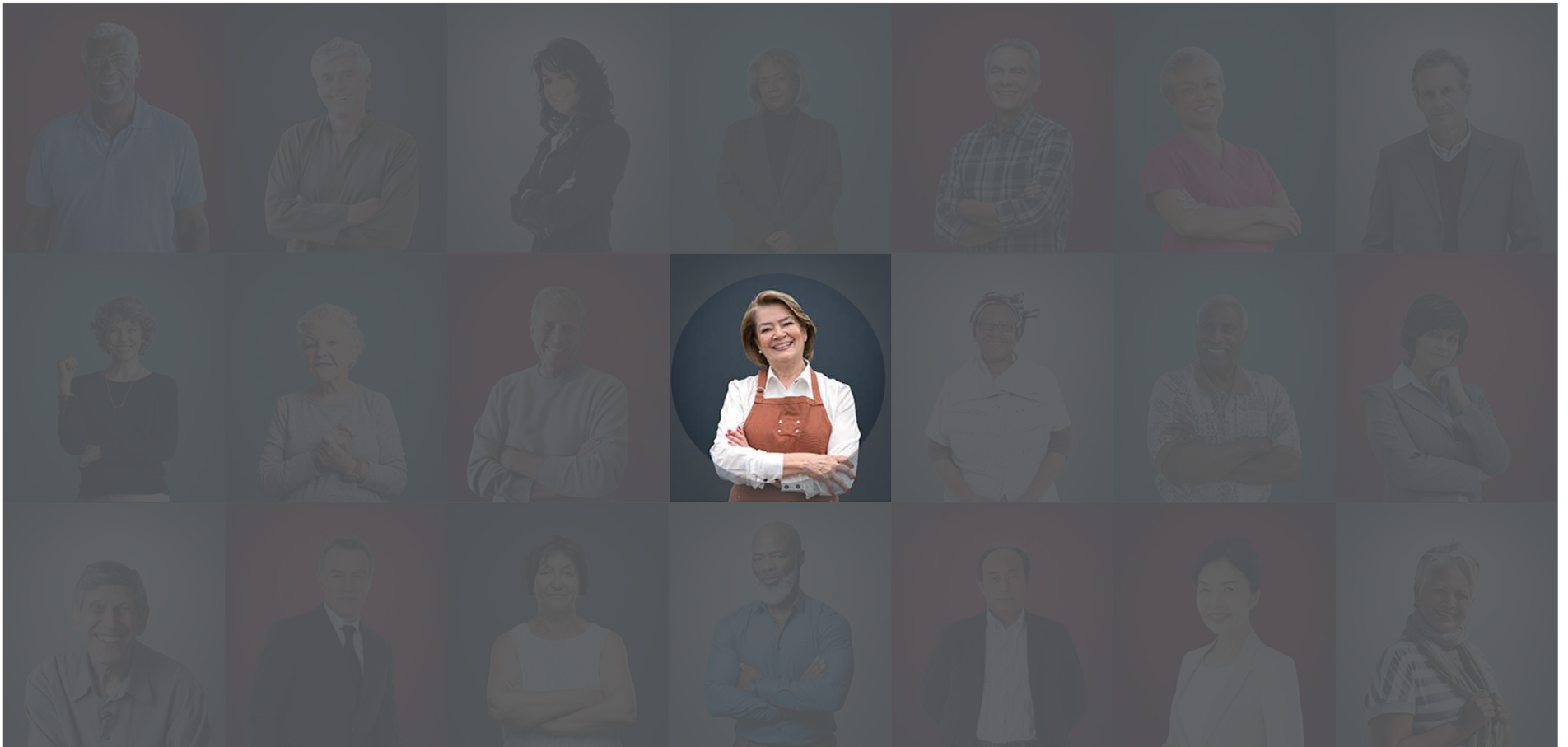
Learning Objectives

- Discuss the natural listening strategies utilized by the brain in the normal auditory system
- Describe how ReSound ONE M&RIE, All Access Directionality, and Ultra Focus support natural listening strategies
- Identify patient benefits provided by ReSound One directionality features





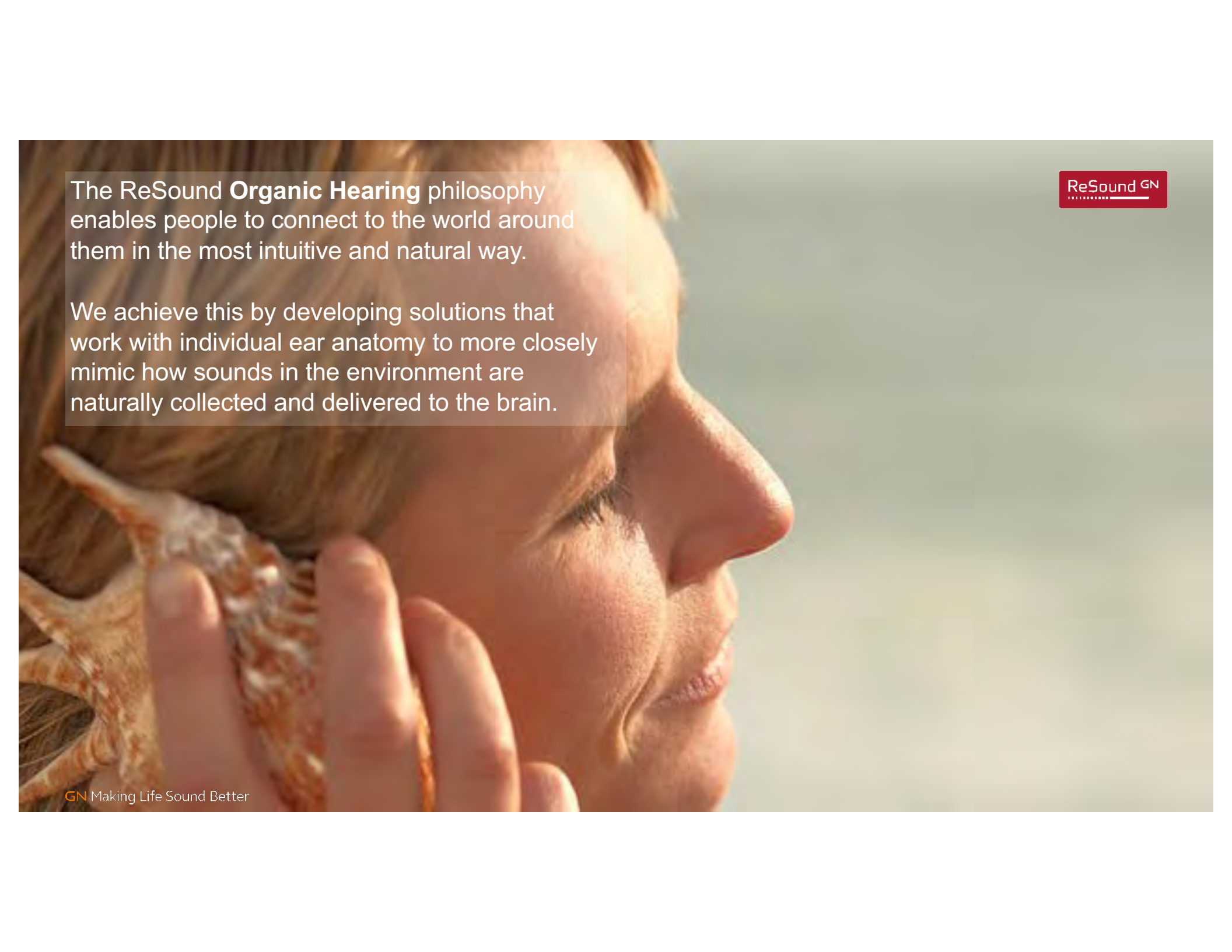
ReSound Organic Hearing Philosophy





Each Person's Hearing is **One** of a Kind



A close-up, profile view of a woman's face as she holds a seashell to her ear. The lighting is warm and soft, highlighting the contours of her face and the texture of the seashell. The background is a blurred, light-colored surface, possibly water or a sky.

The ReSound **Organic Hearing** philosophy enables people to connect to the world around them in the most intuitive and natural way.

We achieve this by developing solutions that work with individual ear anatomy to more closely mimic how sounds in the environment are naturally collected and delivered to the brain.

ReSound ^{GN}





Spatial Cue Preservation



Binaural Listening



Speech Intelligibility

Spatial Cue Preservation Strategy

ReSound GN



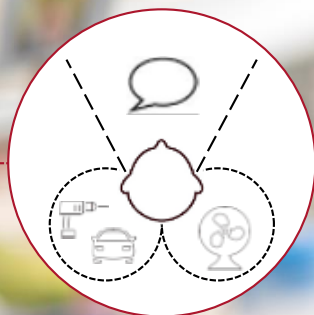
Binaural Listening Strategy

ReSound GN



Speech Intelligibility Strategy

ReSound GN



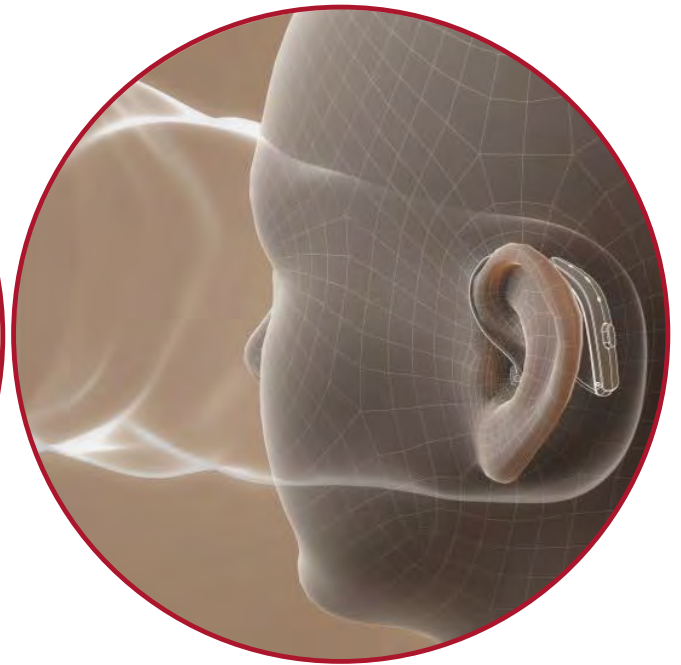
All Access Directionality



Spatial Cue Preservation Strategy



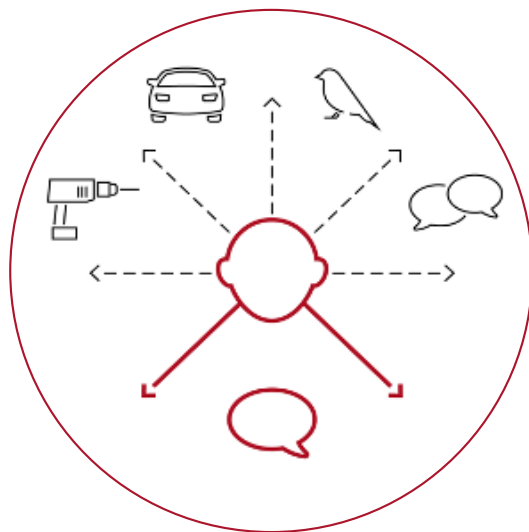
Binaural Listening Strategy

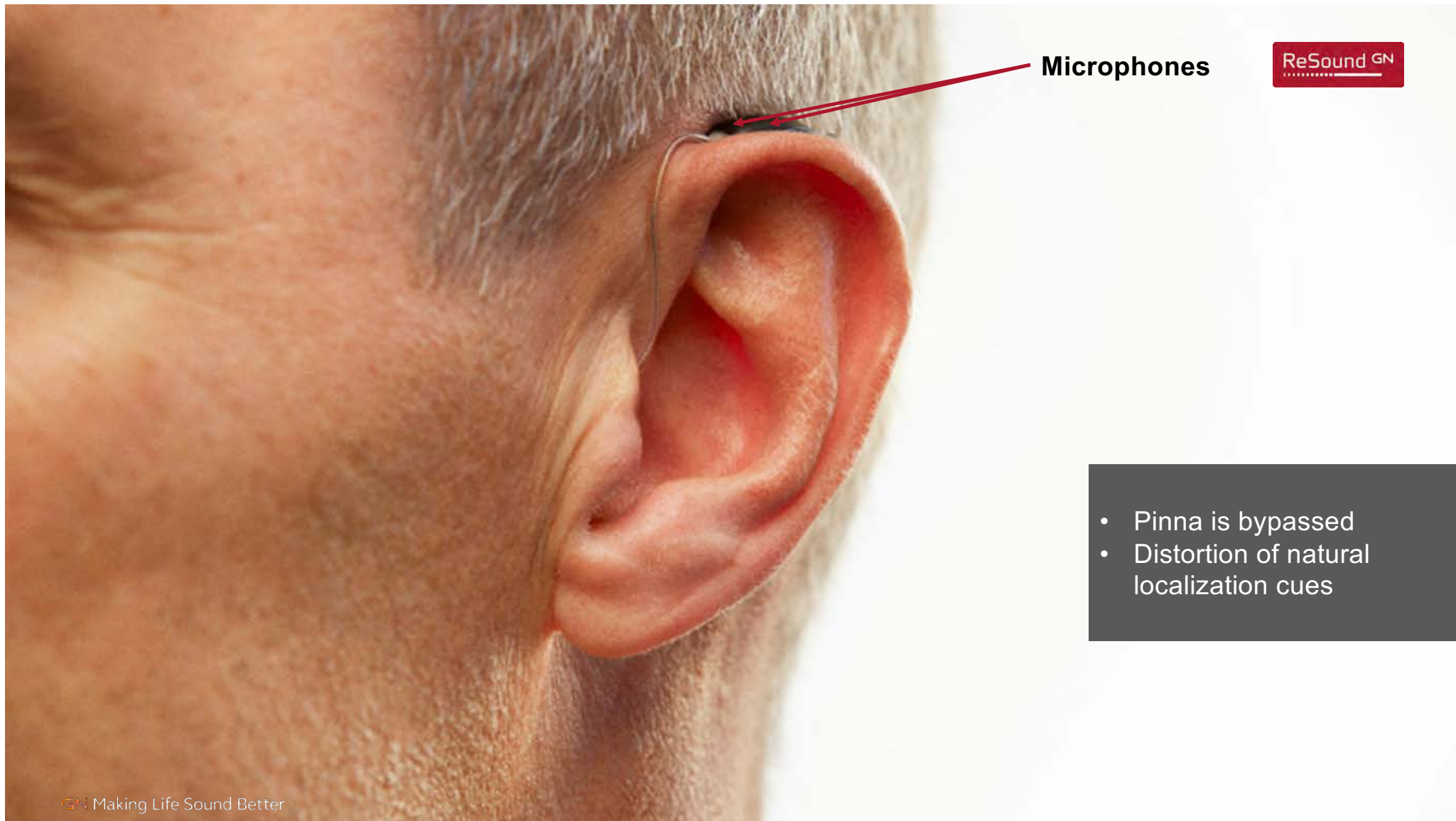


Speech Intelligibility Strategy

All Access Directionality

ReSound GN



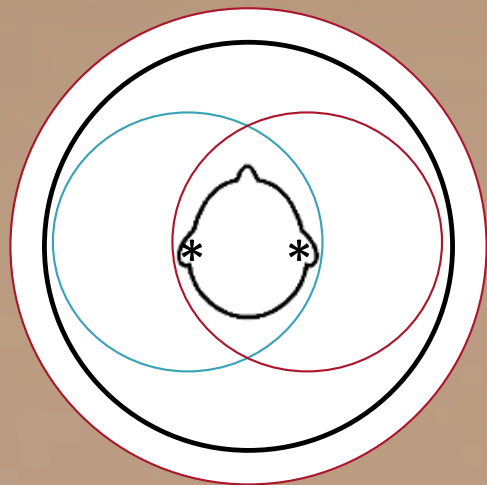


Microphones

ReSound GN

- Pinna is bypassed
- Distortion of natural localization cues

Spatial Cue Preservation



GN Making Life Sound Better

ReSound **GN**



M&RIE

Microphone and Receiver-In-Ear

M&RIE is inspired by our organic hearing philosophy, combines the two traditional microphones with a third that sits discreetly inside the ear canal as an integrated part of the receiver module.



M&RIE provides truly
Organic Hearing through
Individualized Pinna Cues

GN Making Life Sound Better



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M&RIE

Evidence



GN Making Life Sound Better

M&RIE Advantages and Benefits

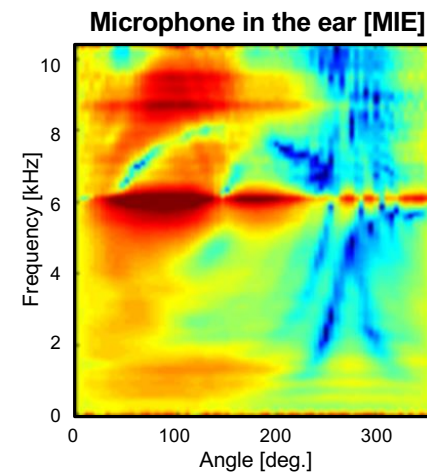
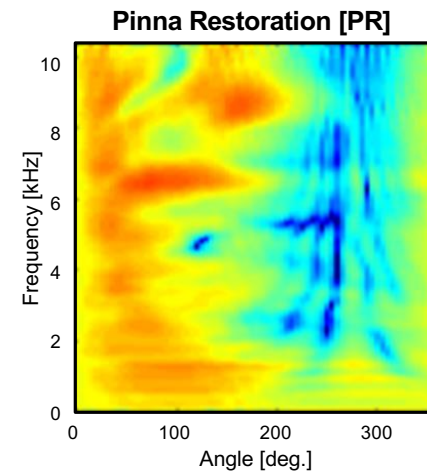
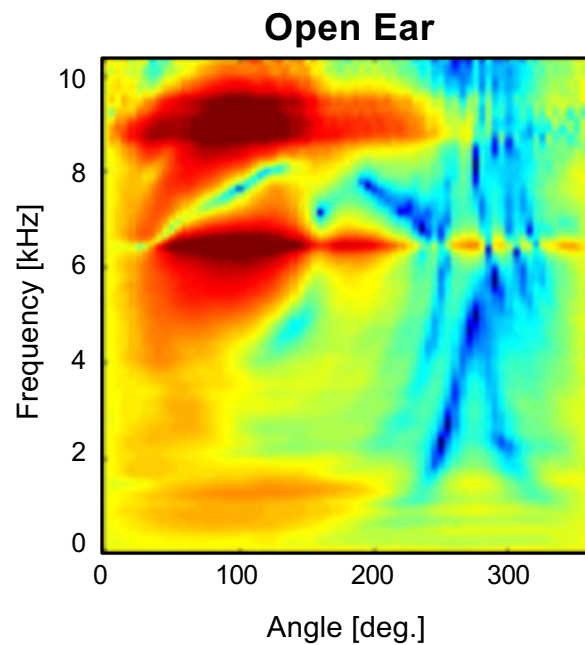
Improved localization

Natural sound quality

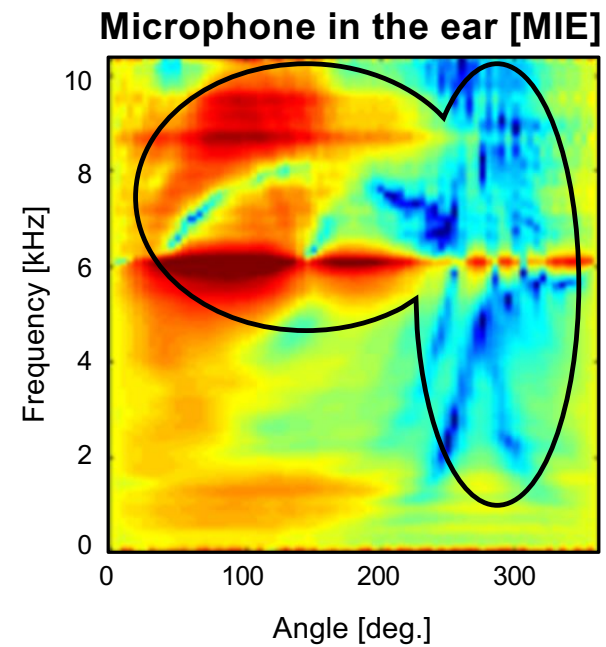
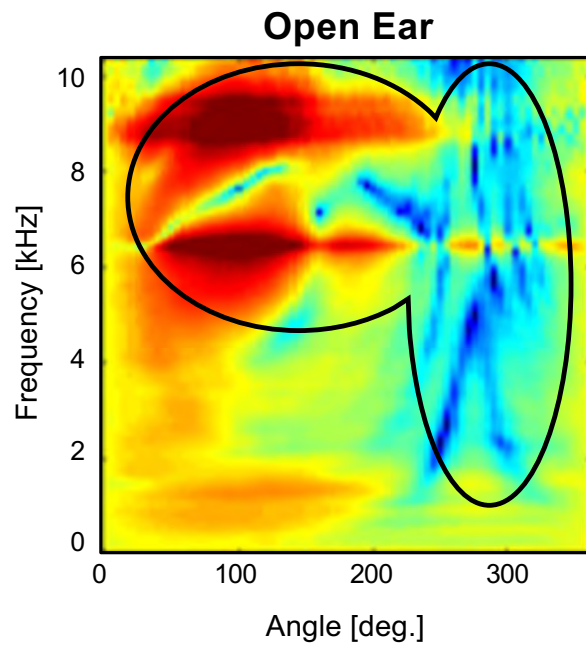
Comfort in wind



Improved Localization & Natural Sound Quality



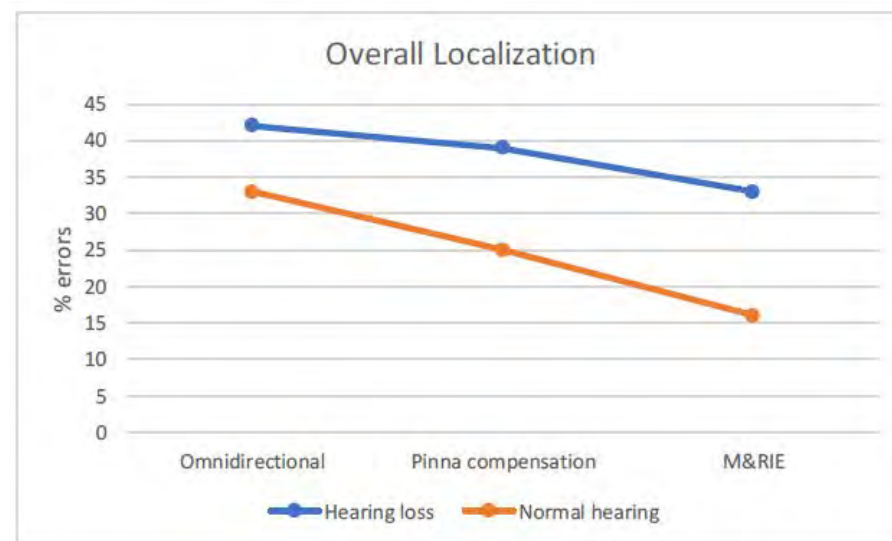
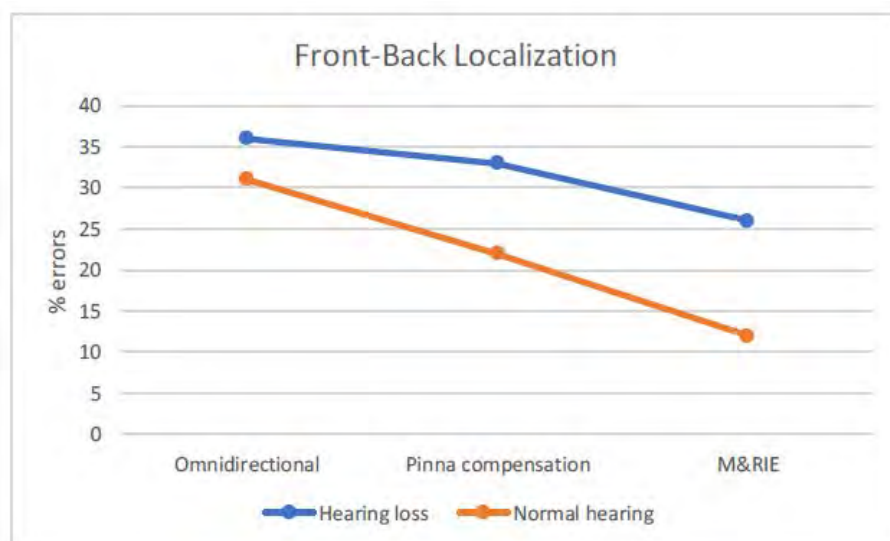
Improved Localization & Natural Sound Quality



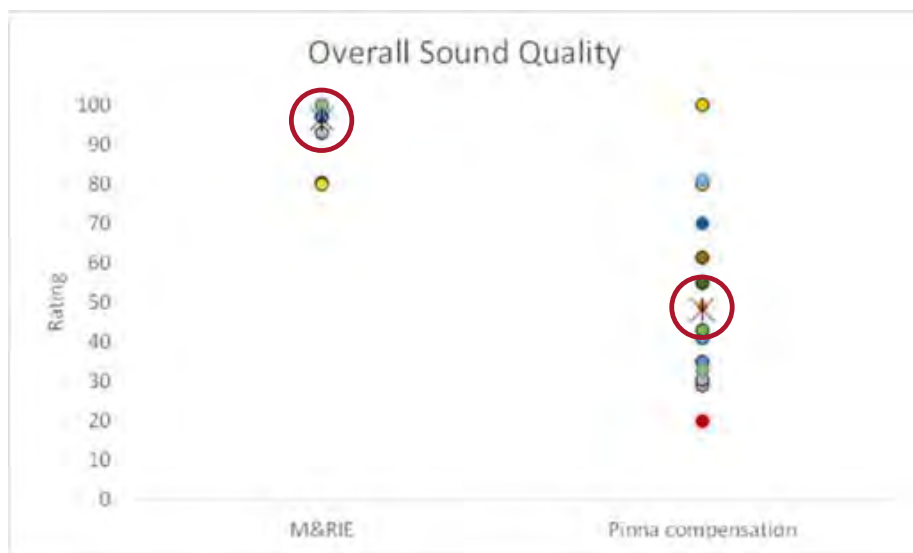
ReSound ONE

The groundbreaking M&RIE hearing solution

Improved localization



Natural sound quality



Comfort in wind



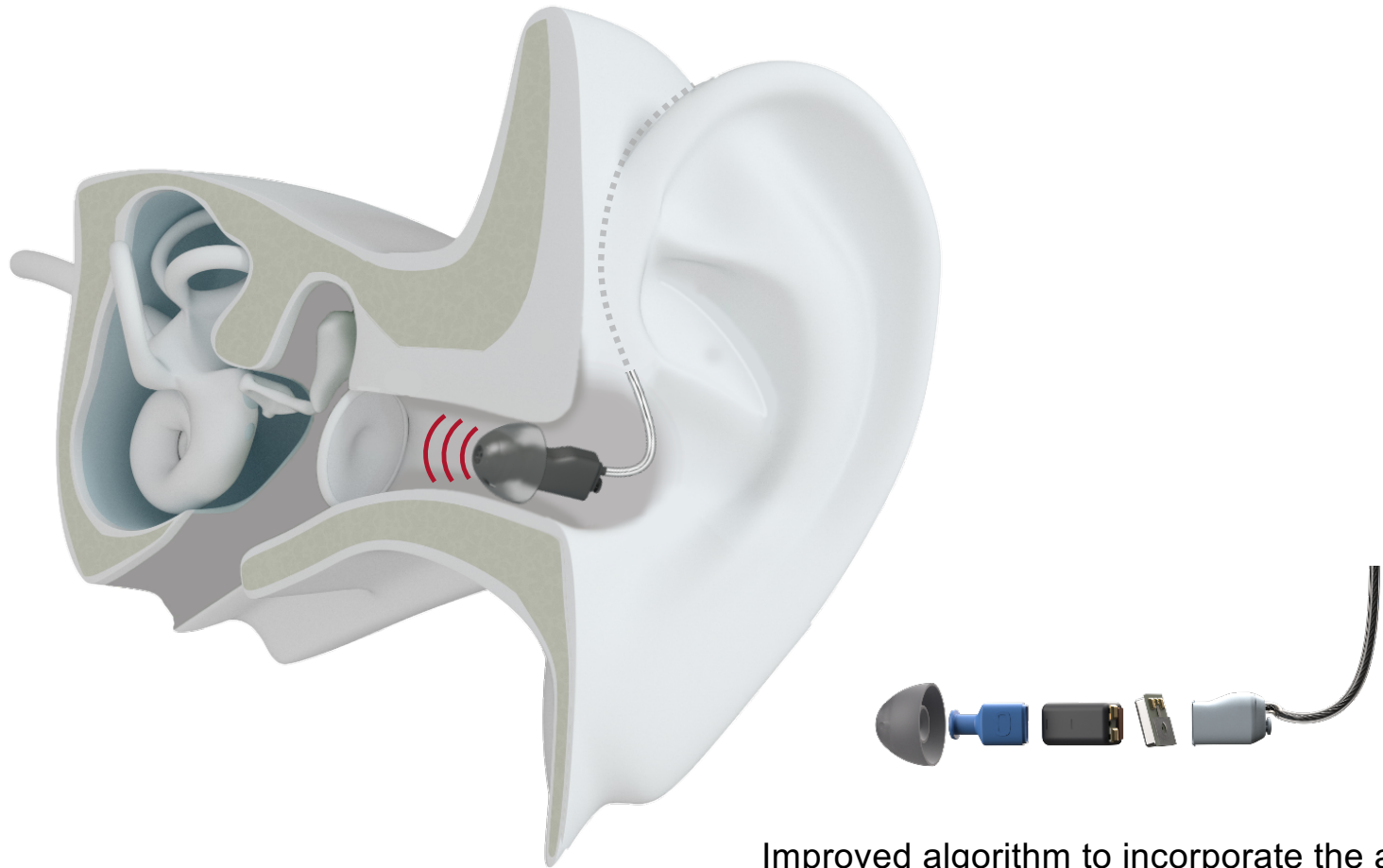
Difference in average wind noise with M&RIE compared to omnidirectional (dB)

ReSound ONE

Benefits of Microphone & Receiver-In-Ear (M&RIE)
in a windy environment

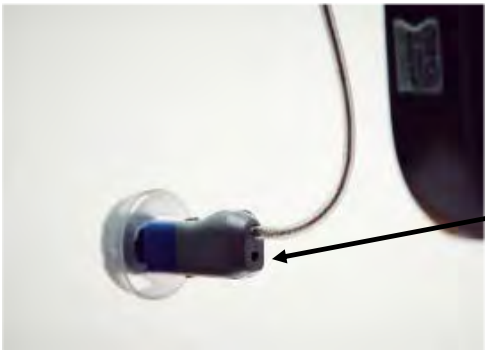
M&RIE and DFS Ultra III

ReSound GN

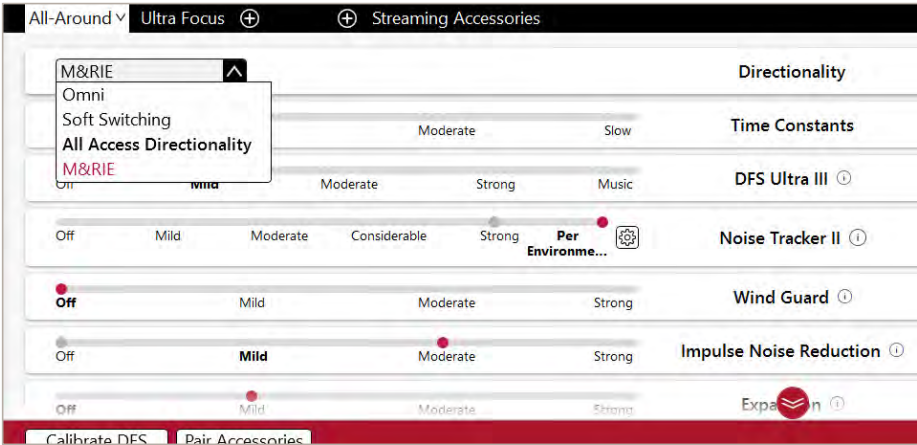


Improved algorithm to incorporate the additional microphone and proximity to the receiver

M&RIE Mode

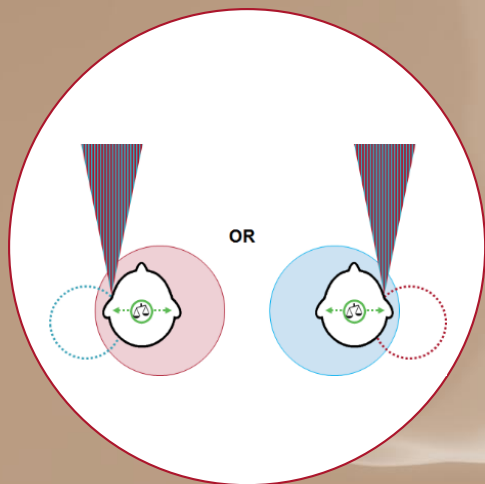


microphone port



Binaural Listening

ReSound GN



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Speech Intelligibility

ReSound GN

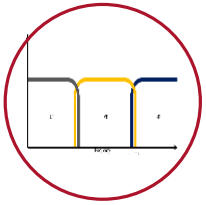


GN Making Life Sound Better

Supporting a Natural Hearing Experience



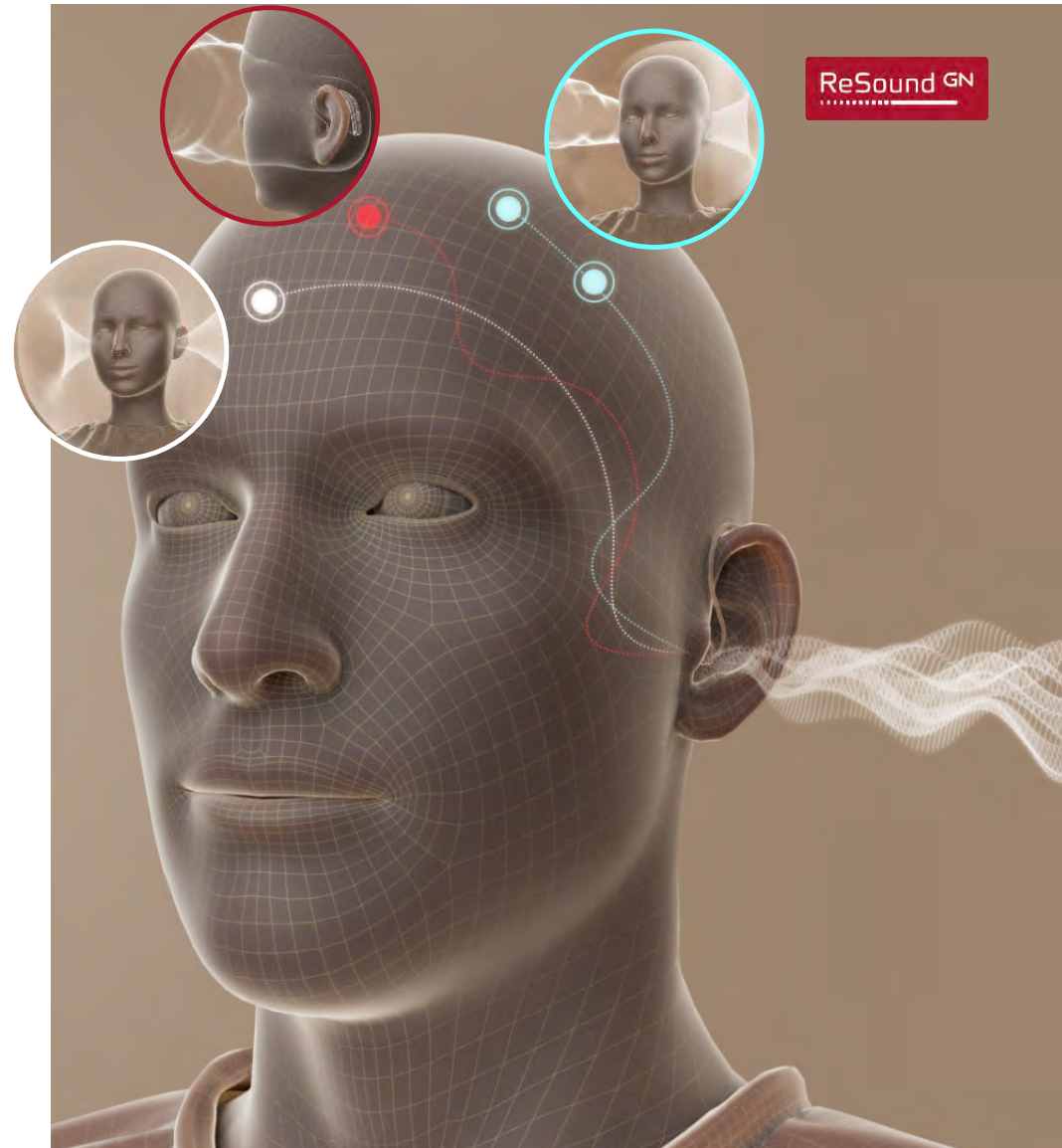
Unique application strategy



Multi-band directionality



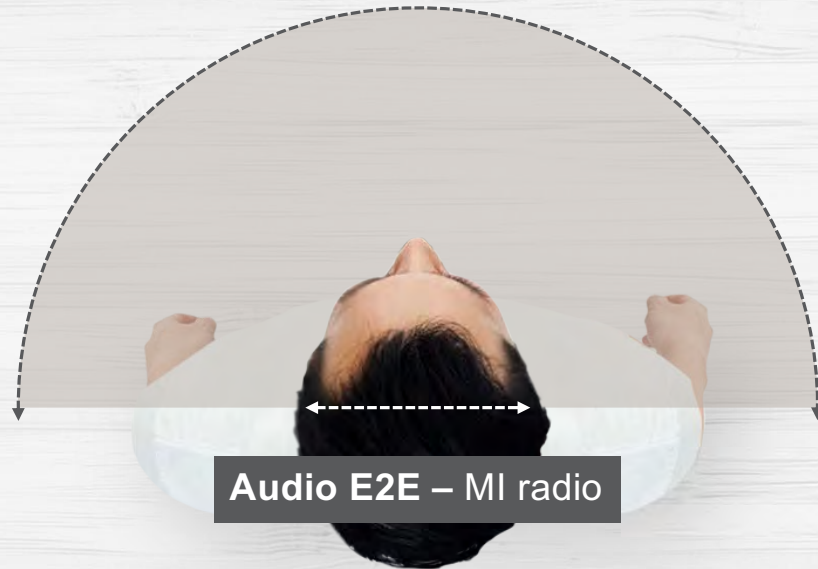
Weighted beamforming



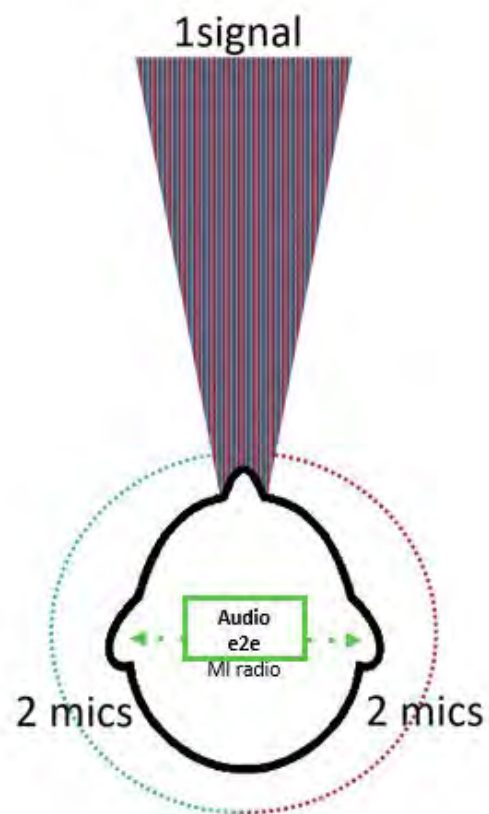
New Magnetic Induction (MI) Radio

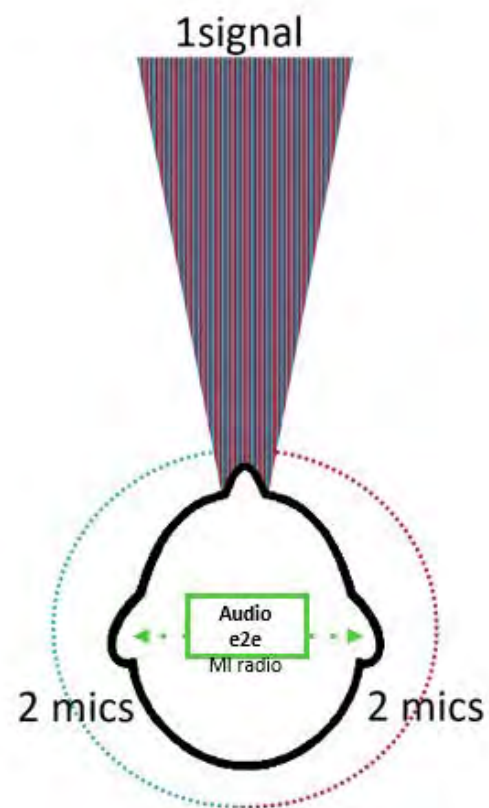
ReSound GN

Data E2E - 2.4 GHz

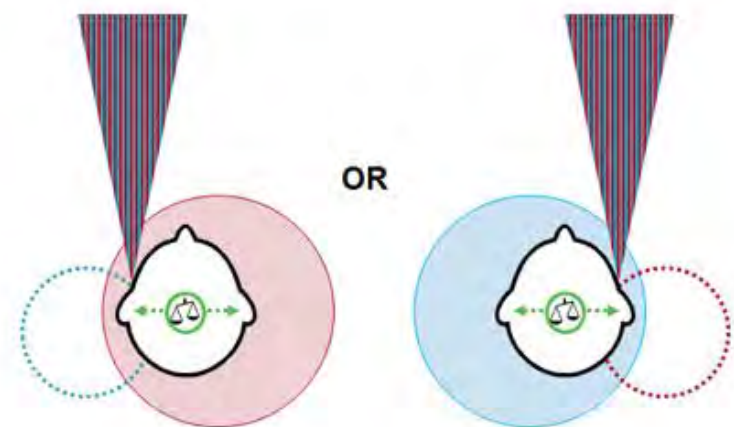


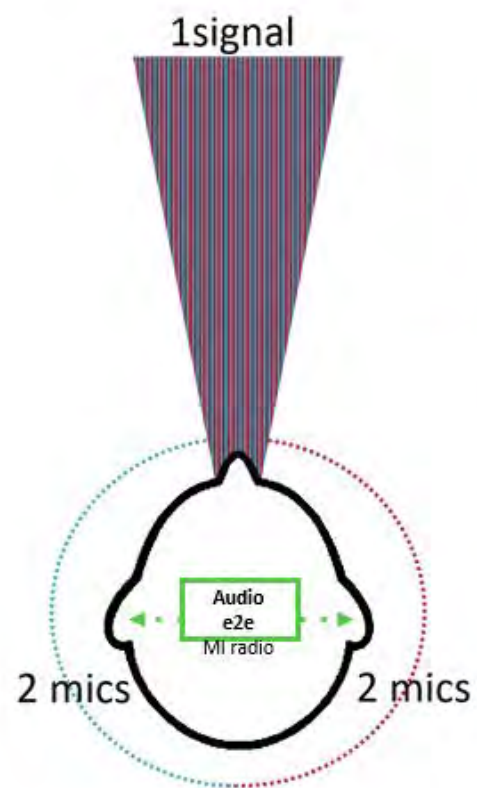
Audio E2E – MI radio



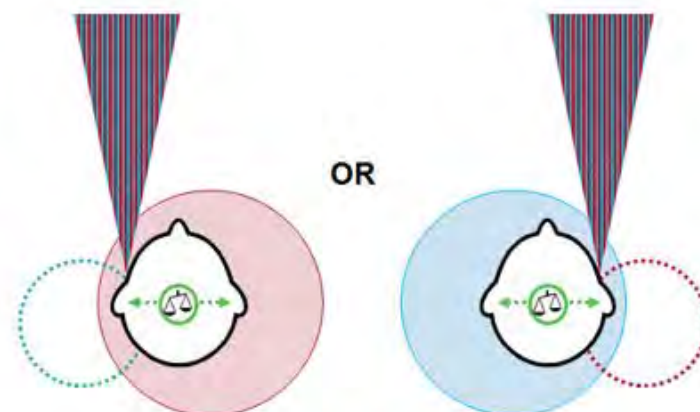


Applied to focus
(directional) ear in
Binaural Listening
Strategy





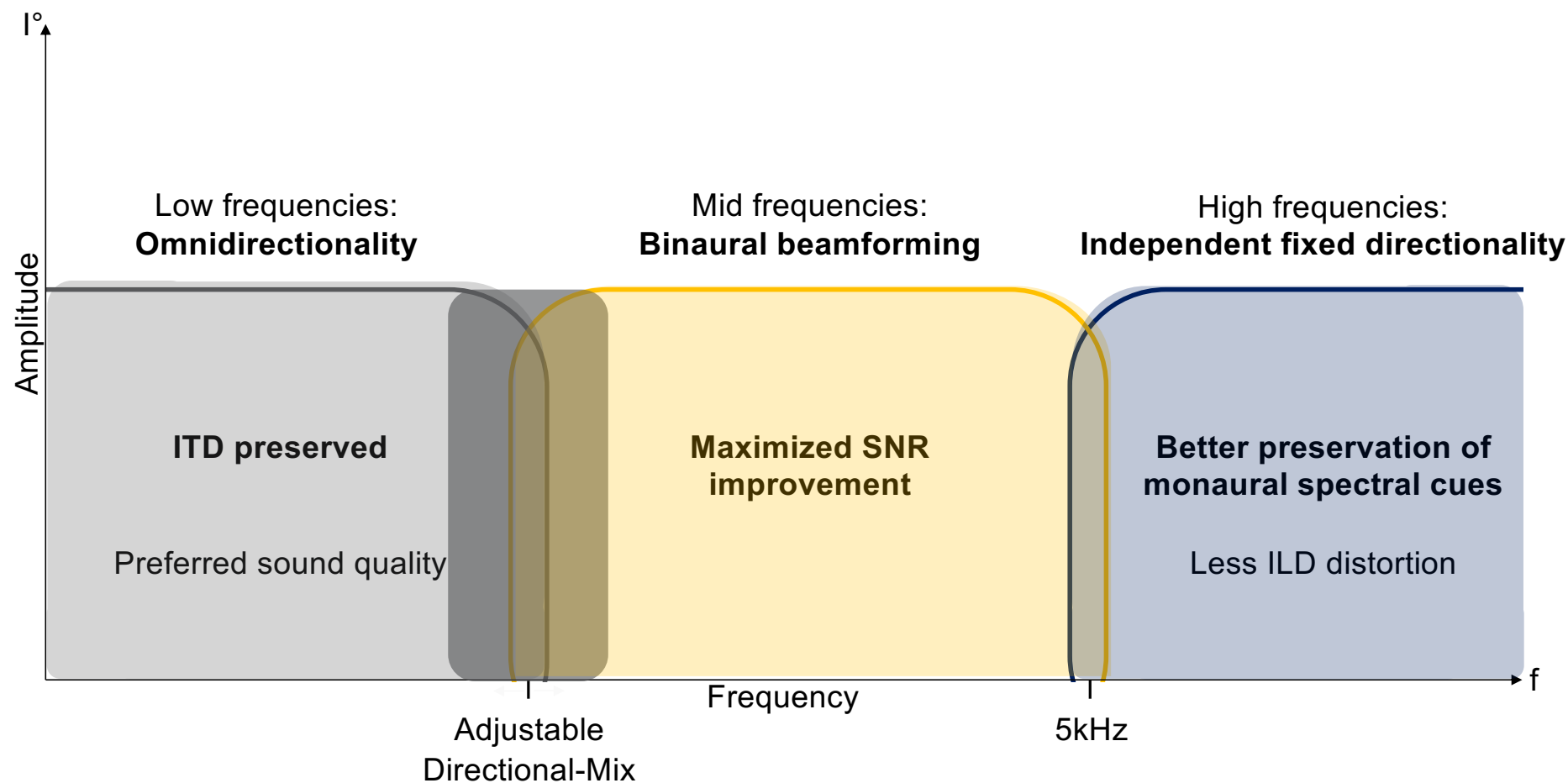
Applied to focus
(directional) ear in
Binaural Listening
Strategy



Applied to both
directional ears in
Speech Intelligibility
Strategy

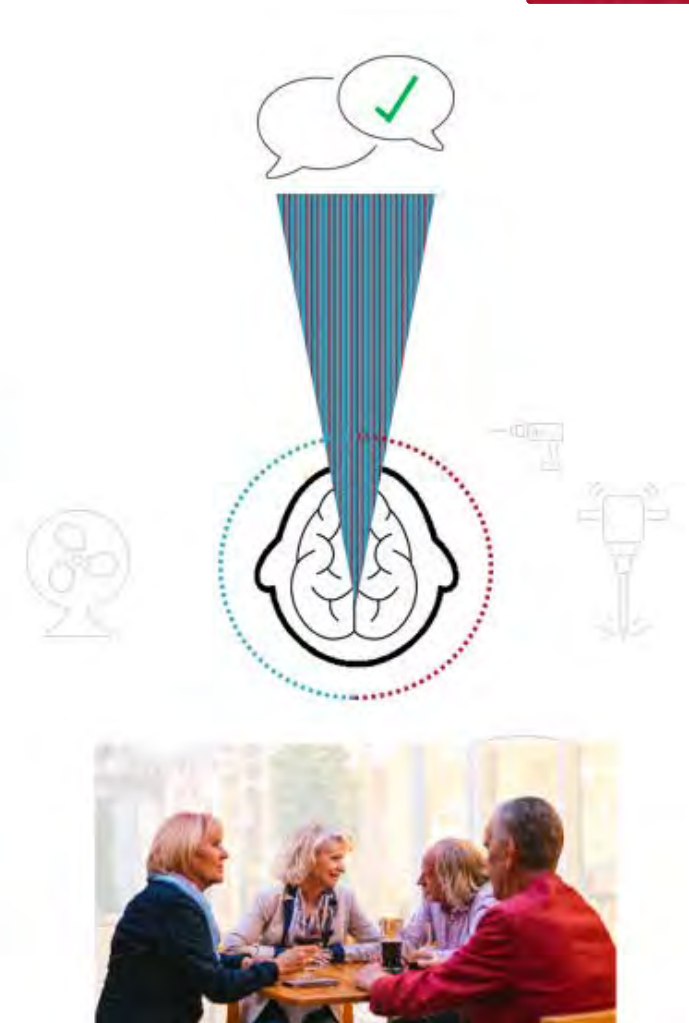
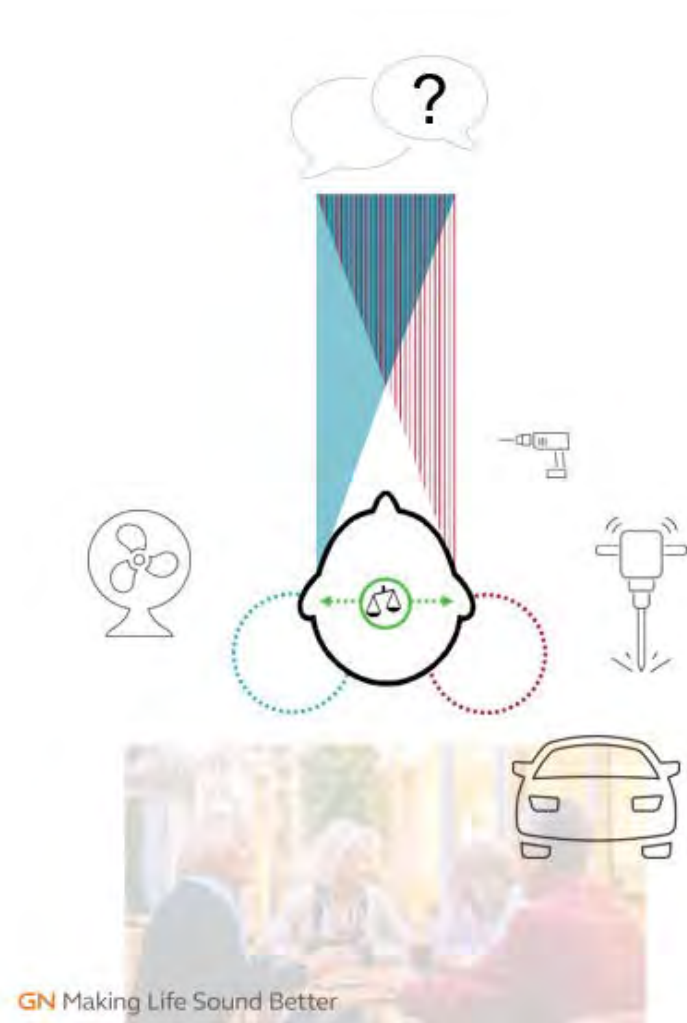


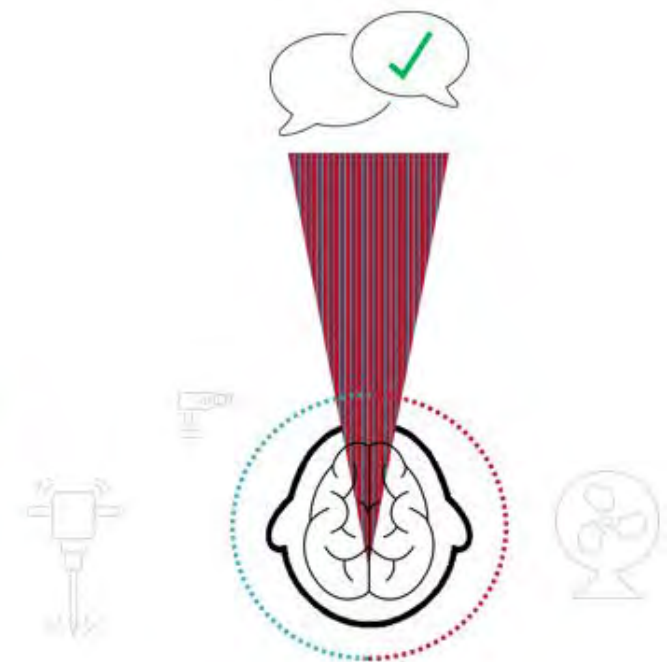
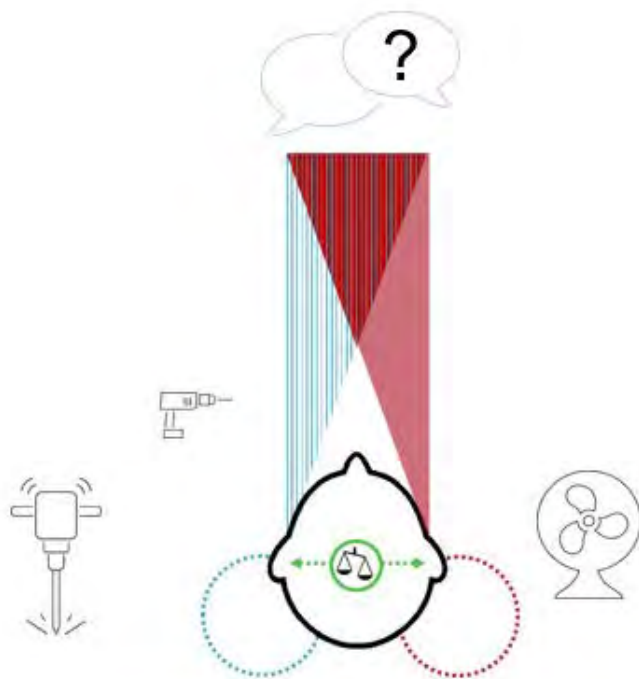
Multi-band Directional Approach



Weighted Beamformer Blending



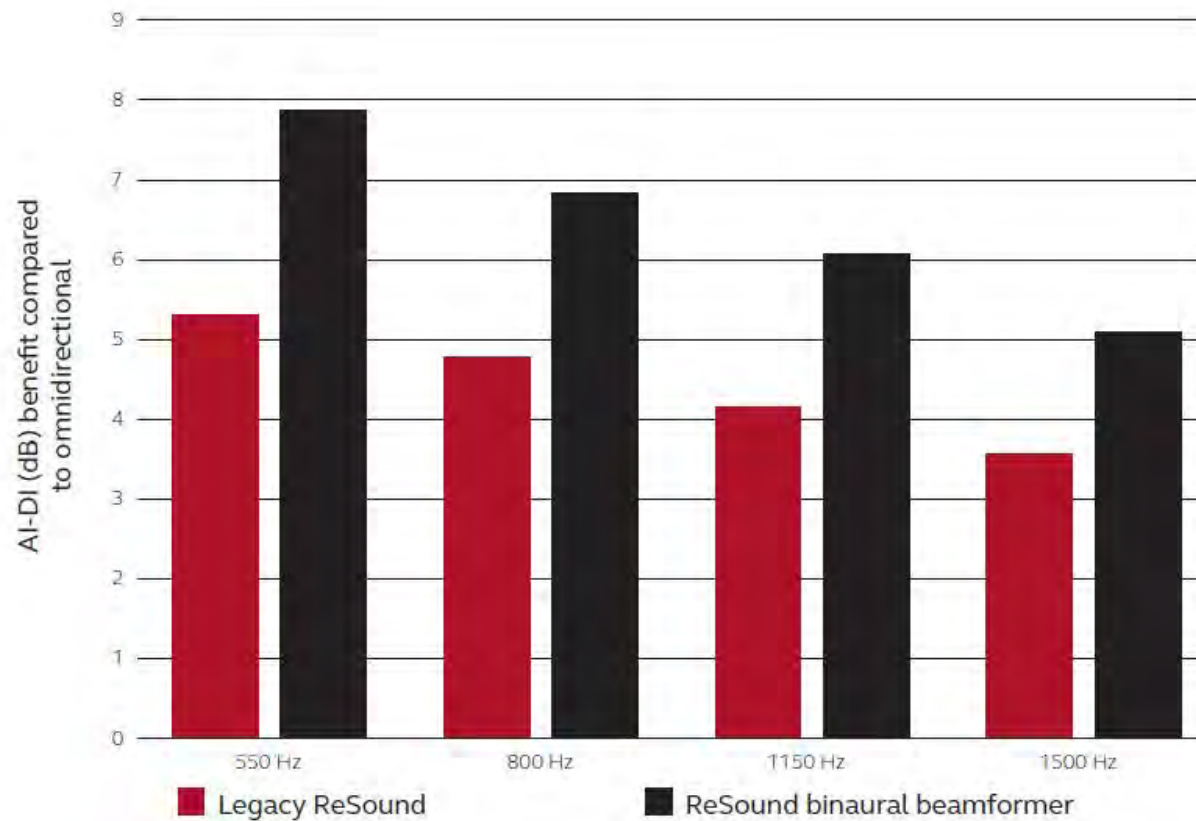




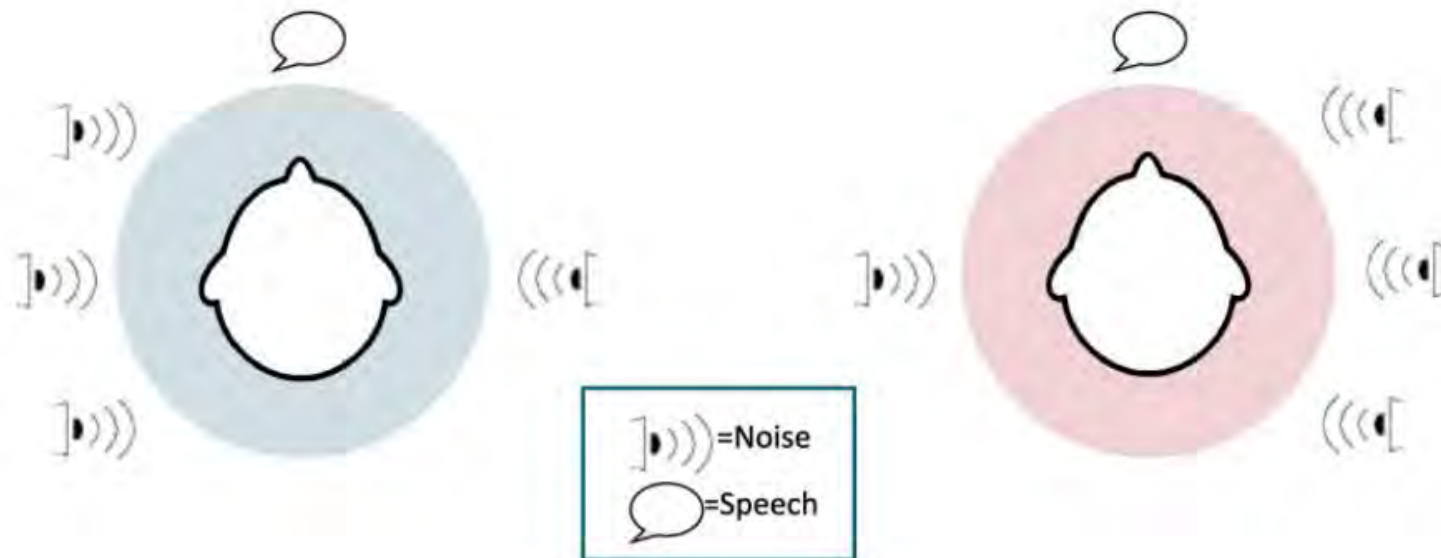
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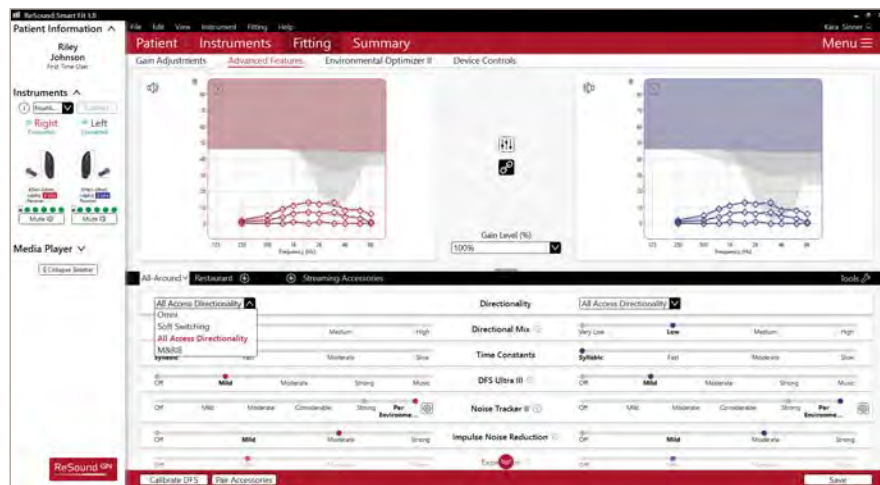
AI-DI Measurements for ReSound ONE Beamformer



Weighted Beamformer Blending Provides 2dB Improved Speech Performance



All Access Directionality



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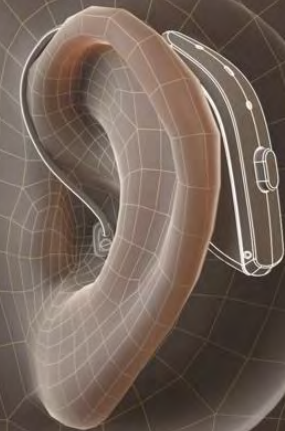
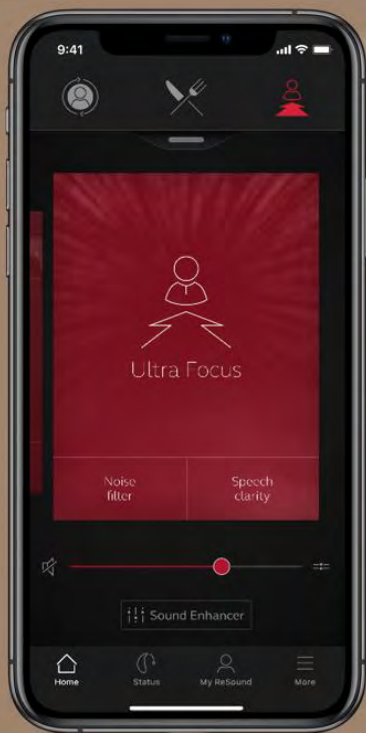


ReSound ONE

The most natural sound quality
in an RIE hearing aid, in any situation

New Ultra Focus Program

ReSound GN



***30% improved
speech recognition**



GN Making Life Sound Better

*Groth J. (2020). The evolution of the binaural hearing strategy: All Access Directionality and Ultra Focus. ReSound white paper.



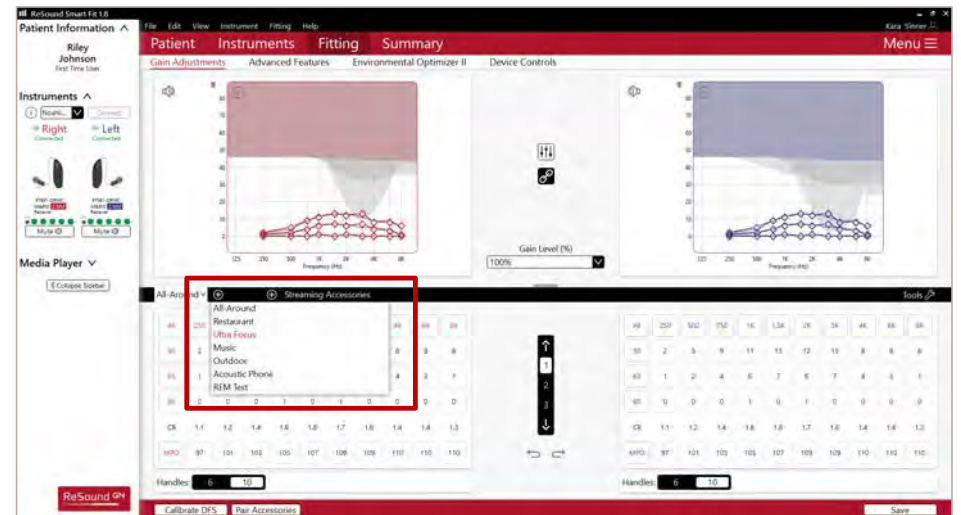
Ultra Focus



GN Making Life Sound Better

Ultra Focus

ReSound GN





Ultra Focus



Ultra Focus



Navigation bar: All-Around | **Ultra Focus** ▾ | Acoustic Phone ⊕ | ⊕ Streaming Accessories

Very Low	Low	Medium	High	Directional Mix ⓘ		
Syllabic	Fast	Moderate	Slow	Time Constants		
Off	Mild	Moderate	Strong	Music	DFS Ultra III ⓘ	
Off	Mild	Moderate	Considerable	Strong	Per Environmen...	Noise Tracker II ⓘ

ReSound ONE

Ultra Focus for the best 1:1 hearing experience
in the toughest environments

ReSound Beamforming

- ✓ Balances SNR maximization for speech in front of the patient with access to surrounding sounds and spatial cue preservation
- ✓ Is multi-band and uses weighted e2e audio blending to the less noisy ear
- ✓ Can improve the AI-DI by 2dB compared to non-weighted beamforming

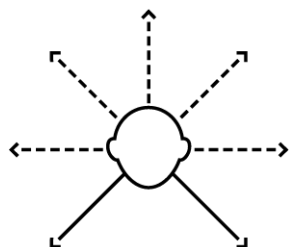


ReSound ONE Benefits

ALL ACCESS DIRECTIONALITY

BENEFITS

- Automatic
- Speech intelligibility and environmental awareness
- Beamforming for 1:1 conversation even in the toughest environments



ULTRA FOCUS

BENEFITS

- Perform better in very noisy environments 1:1 by up to 30%*
- Confidence to hear in the most difficult situations
- Patient-Controlled

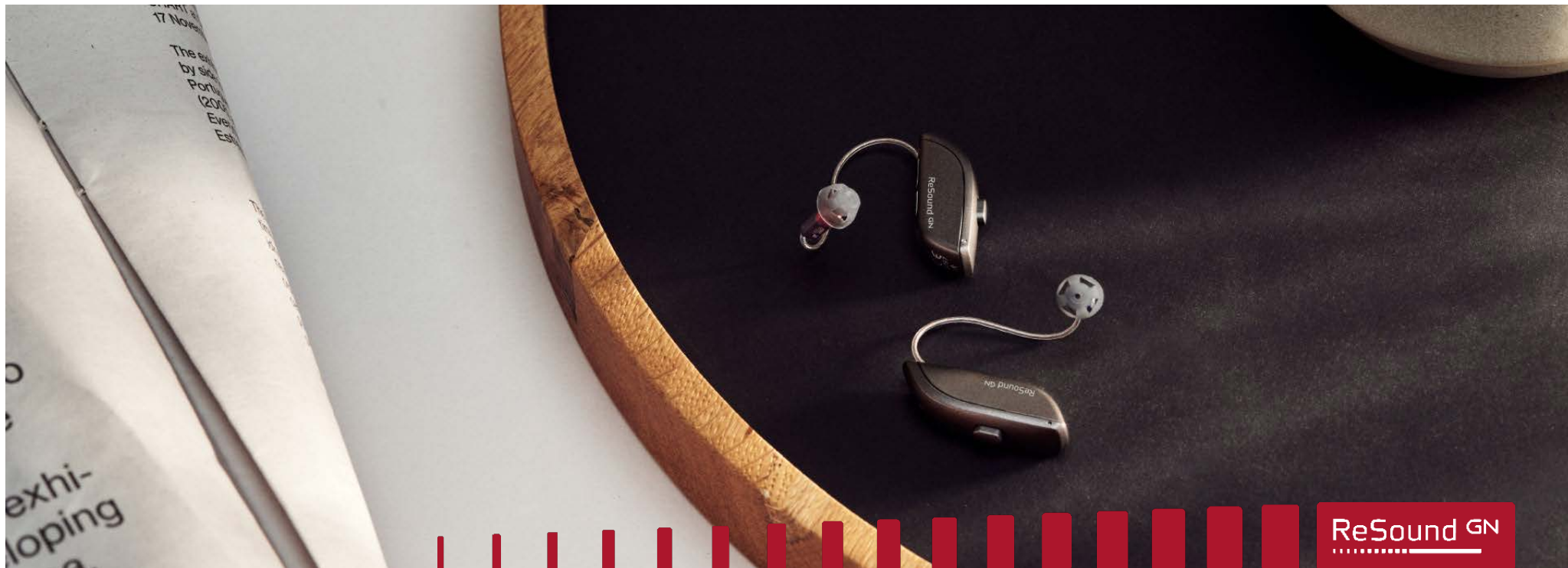


M&RIE

BENEFITS

- Greater depth and direction
- Wind Noise Reduction
- Natural Sound Quality





Questions?

ReSound Government Services

1-800-392-9932

gs.resound.com

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ReSound ONE

Thank you!

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