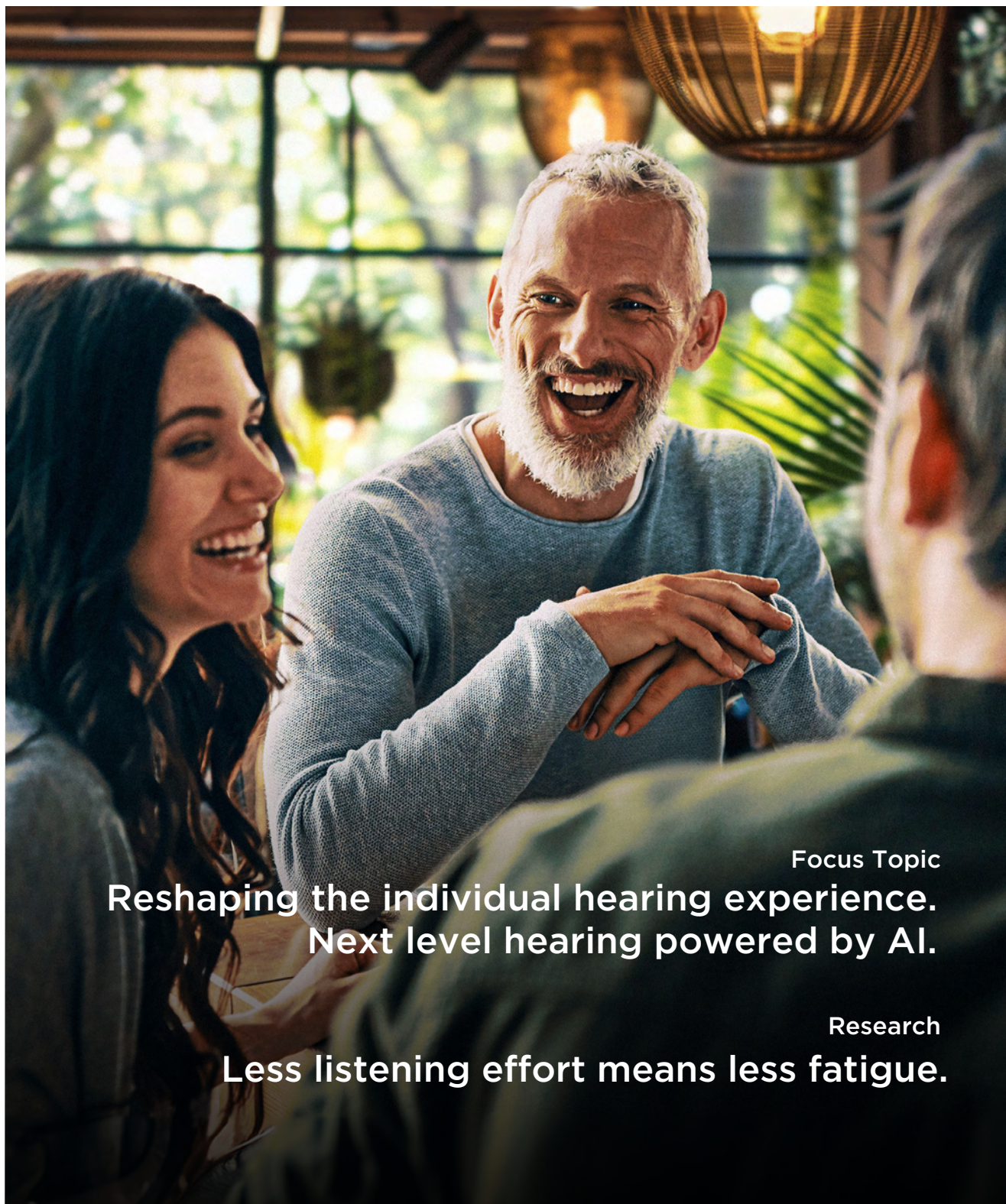


Hearing Loop

NEWSLETTER

SEPTEMBER — 2024

ISSUE №9



Focus Topic

Reshaping the individual hearing experience.
Next level hearing powered by AI.

Research

Less listening effort means less fatigue.

Dear partner,

Welcome to a special edition of the ENT Newsletter. This issue is all about how artificial intelligence (AI) is revolutionizing hearing care. Learn why the future might look even brighter for those with hearing loss, why less listening effort means less fatigue and how the new AI-enhanced Phonak Infinio platform makes all the difference for hearing aid users in noisy listening situations. To dive even deeper into the opportunities of AI in hearing healthcare, we welcome you to watch our webinar.

Enjoy the read!

The Triton Hearing Team

FOCUS TOPIC

Phonak Audéo Sphere™ Infinio

Reshaping the individual hearing experience.

AI technologies, particularly machine learning and deep neural networks (DNN), are revolutionizing hearing aids. Offering a solution to one of the most challenging needs of hearing aid users to date, effortless speech understanding in noisy situations, AI-powered hearing solutions bring tangible benefits to those with hearing loss: increased confidence in social gatherings, easier communication in challenging environments, and the chance to fully engage in dynamic conversations again.

Sonova's latest AI-enabled hearing aids, Phonak Audéo Sphere™ Infinio, utilise advanced DNN to reshape the individual hearing experience in several ways:

Outperforming any existing hearing solution in the market in spontaneous acceptance, speech clarity, reliability, and connectivity, Phonak Audéo Sphere™ Infinio provides next level hearing powered by AI.²³⁴

From health monitoring to language translation: expanding the possibilities for hearing aids



Phonak Audéo Sphere™ Infinio

Exceptional sound quality from the first moment

29% less listening effort¹

21% less fatigue at the end of the day¹

93% customer satisfaction from the first fit²

AI turns out to be a game changer in hearing care already today, and the long-term outlook might look even brighter for those with hearing loss. Experts expect AI-enabled hearing aids to become even more adaptable, personalised, and intuitive over time. They may be able to learn and adjust to individual user preferences and environments with greater precision, providing a seamless and natural hearing experience.

Potential future applications also include improved health monitoring, direct language translation, integration with smart home devices, and advanced tinnitus management.

Learn more about AI in hearing aids.



What is a Deep Neural Network (DNN)?

DNN is a machine learning model inspired by the way our brain works. It is deep in the sense that it consists of sequential layers of computation, and these many layers help the model to perform very complex tasks. For instance, isolate and enhance speech in a noisy environment, but doing this without creating artifacts or reducing the naturalness of the perceived speech.



Less listening effort means less fatigue.

For those affected by hearing loss, it is not only more difficult to understand what is being said; they also need to pay increased attention and concentrate to follow conversations. It is not surprising that a typical symptom reported by people with hearing loss is mental fatigue, resulting from the additional listening effort in daily life situations.

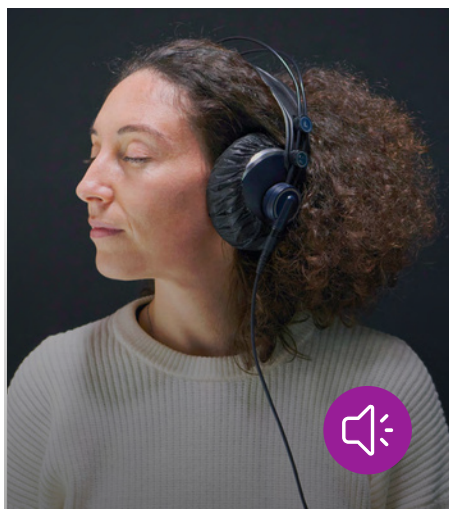
A research team at the Hörzentrum Oldenburg has recently found that the use of Speech Enhancer, an adaptive algorithm designed to enhance soft speech signal in quiet situations, reduced subjective listening effort by 29% when listening to soft or distant speech.¹ This reduction in turn resulted in 21% less fatigue at the end of the day.¹ Another key finding of the clinical investigation was that Speech Enhancer led to higher scores in a memory and comprehension test.¹

One of the biggest challenges for hearing aid wearers is detecting distant speech when someone is talking to them from a next door room. Speech Enhancer reduces listening effort of speech, from an adjacent room, by up to 45%.^{*5}

Enabled by AI, the ability for hearing aids to detect and classify soft and distance speech so that it can be better understood answers a real-life challenge experienced by many, bringing the hearing experience to a whole new level and allowing them to feel more relaxed and less tired at the end of the day.

*in quiet listening situation for adult hearing impaired subjects with moderate to severe hearing loss

Read the
full story.



Hearing is believing.

Unprecedented speech clarity, less listening effort, full confidence in any listening situation – sounds great, but want more proof?

With our sound demo, you can experience for yourself the difference the AI-based Phonak Audéo Sphere™ Infinio hearing aids make in a conversation in a noisy restaurant setting.

Listen
in.



Virtual Physician Symposium

“How can artificial intelligence support hearing healthcare?”

Join our host Johanna Bailey-Stark Au.D., Vice President of Audiology and Medicalization at Sonova Audiological Care, and an international panel of experts for an insightful exploration into the role of artificial intelligence in revolutionizing hearing healthcare. In our Virtual Physician Symposium held on September 25 2024 three renowned researchers will share latest scientific insights.

- Prof. Björn Schuller: Audio Intelligence for healthcare
- Prof. Timo Gerkmann: Artificial Intelligence for Speech Enhancement
- Prof. Padraig Kitterick: The patient benefits of artificial intelligence in hearing technology

Discover the latest advancements and their potential to enhance diagnostic accuracy, personalise treatments, and improve patient outcomes.



The event will be held in English, with captions and subtitles through our AI translation tool with 60 languages.

Watch
now.





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¹Latzel, M., Heeren, J and Lesimple, C. (2024) „Speech Enhancer reduces listening effort and fatigue.“ Phonak Field Study News retrieved from www.phonak.com/evidence
²Stewart, E., Adler, M., Seitz-Paquette, K., „Adaptive Phonak Digital (APD) 3.0 is the preferred first fit compared to a leading competitor device“. Phonak Field Study News in preparation, expected August 2024 ³Wright, A., Kuehnelt, V., Keller, M., Seitz-Paquette, K., Latzel, M. (2024). "Spheric Speech Clarity applies DNN signal processing to significantly improve speech understanding from any direction and reduce the listening effort." Phonak Field Study News retrieved from <https://www.phonak.com/evidence> ⁴Sonova applies 135 individual stringent tests to all of its products. ⁵Habicht, J. & Schuepbach-Wolf, M. (2024). Speech Enhancer reduces subjective listening effort of speech by up to 45%. Phonak Field Study News retrieved from www.phonak.com/evidence