

# Questions & Propositions to International Hearing Instrument Industry, “big five”

## **Int. Hearing Instr. Ind. (“big five”)**

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## **Introduction**

The International Hearing Instrument Industry (i.c. IRC) refers to the expanding role of the hearing care practitioner given rapidly changing technologies. Today, the hearing care practitioner needs to understand social and psychological factors, vestibular anatomy and physiology, cognitive screening tools, and biometric functions, topics that have not been part of the traditional scope of practice.

Meanwhile the outside world is changing with the upcoming role of digital and automated information exchange, artificial intelligence, rapid communication techniques, etc. In <https://computationalaudiology.com/> we combine artificial intelligence, machine learning and audiology in order to stimulate innovations for hearing impaired people anywhere and to reduce the global burden of hearing loss.

All audiology stakeholders in The Netherlands are preparing new positions, roles and challenges in audiology. We try to reach this in cooperation with our international partners, especially our research partners from the Hearing Industry. That’s why we plan to organize an international conference in September 2023, for our national colleagues together with the International Hearing Instrument Industry (“big five”), in a Round Table discussion with the representatives of the “big five”, discussing our proposed questions and propositions/statements regarding these changing times and challenges in audiology.

## **Time and venue**

Monday September 18 (1 PM, CET), 2023, Buruma Lecture Hall (Education Building), Leiden University Medical Center (close to AMS airport Schiphol), Hippocratespad 21, 2333 ZD Netherlands.

## **Questions (prepared by NL physicists/audiologists)**

- Telehealth: upcoming techniques like tele-audiometry and tele-hearing aid fitting will take part of regular audiology practices, what are pro’s and con’s, and what more?
- Hearing-aid market: the upcoming role of over-the-counter products, what do we have to expect, what are restrictions, what are opportunities?
- Other new techniques: artificial intelligence, machine learning, virtual and augmented reality, audiology processing in the cloud, how will these techniques influence our diagnostic and rehabilitation practice?
- Global hearing aid provision: what are the possibilities of hearing enhancement through Apps in mobile phones, and more like these developments, is this the future, what do we have to expect, what do we have to prepare (etc.)?
- What is the status of programming “in the cloud”, the role of managing “big data” (archive), the aspect of privacy and safety, data protection, fight against hacking (etc.)?
- Hearing & presbycusis: how to tackle the typical hearing problems of the growing number of elderly people, what extra needs are necessary, how to use possibilities to delay dementia (etc.)?
- The expanding role of the hearing aid specialist: what more than just hearing aid fitting, like what has been mentioned in the introduction: a hearing care specialist needs to understand social and psychological factors, vestibular anatomy and physiology, cognitive screening tools, and biometric functions, topics that have not been part of the traditional scope of practice?!

## Propositions & statements directed to and to be commented on by hearing-aid industry (“big five”)

- For mild, moderate and quite severe hearing impaired people, remote audiometry & hearing aid fitting including a one-time visit to a hearing care professional can lead to an adequate hearing rehabilitation result.
- The use of OTC hearing aids can lead to an adequate hearing rehabilitation outcome for mild to moderate hearing impaired people.
- AI, ML & VR are valuable and indispensable additions to the hearing rehabilitation options for hearing impaired and tinnitus patients/clients, e.g. in combination with cognitive retraining.
- Mobile phone applications, such as hearing apps, can contribute to reducing the hearing rehabilitation backlog in developing countries.
- The hearing care professional of the future is mainly concerned with the guidance of the hearing impaired, also to tackle the problem of “untreated hearing loss”, because hearing aid technical problems can largely be solved automatically and remotely and will require much less attention from the hearing care professional.
- The hearing care professional will have to become an expert in the field of all kinds of biometric functions that can be measured or applied with a hearing aid.
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## Audiology topics (published by ASHA)

- [Adult Hearing Screening](#)
- [Audiology Assistants](#)
- [Aural Rehabilitation for Adults](#)
- [Balance System Disorders](#)
- [Bilingual Service Delivery](#)
- [Central Auditory Processing Disorder](#)
- [Childhood Hearing Screening](#)
- [Classroom Acoustics](#)
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- [Collaborating With Interpreters, Transliterators, and Translators](#)
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- [Cultural Competence](#)
- [Dementia](#)
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- [Hearing Aids \(Adults\)](#)
- [Hearing Aids \(Children\)](#)
- [Hearing Loss in Adults](#)
- [Newborn Hearing Screening](#)
- [Permanent Childhood Hearing Loss](#)
- [Superior Canal Dehiscence](#)
- [Telepractice](#)
- [Tinnitus and Hyperacusis](#)
- [Traumatic Brain Injury in Adults](#)
- [Unbundling Hearing Aid Sales](#)