William Demant

Management Presentation
EUHA 2017
18 October 2017

Søren Nielsen, CEO of William Demant Holding
René Schneider, CFO of William Demant Holding
Jes Olsen, President of Oticon Medical

William Demant

Agenda

- General update
- Hearing Devices
  - Oticon
  - Bernafon
  - Sonic
- Hearing Implants
- Diagnostic Instruments
- Q&A

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General update

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H1 2017 highlights

Market share gains in wholesale of hearing aids, with organic growth of 11% driven by Oticon Opn

12%

Strong revenue growth of 12% with organic growth of 8% for the Group

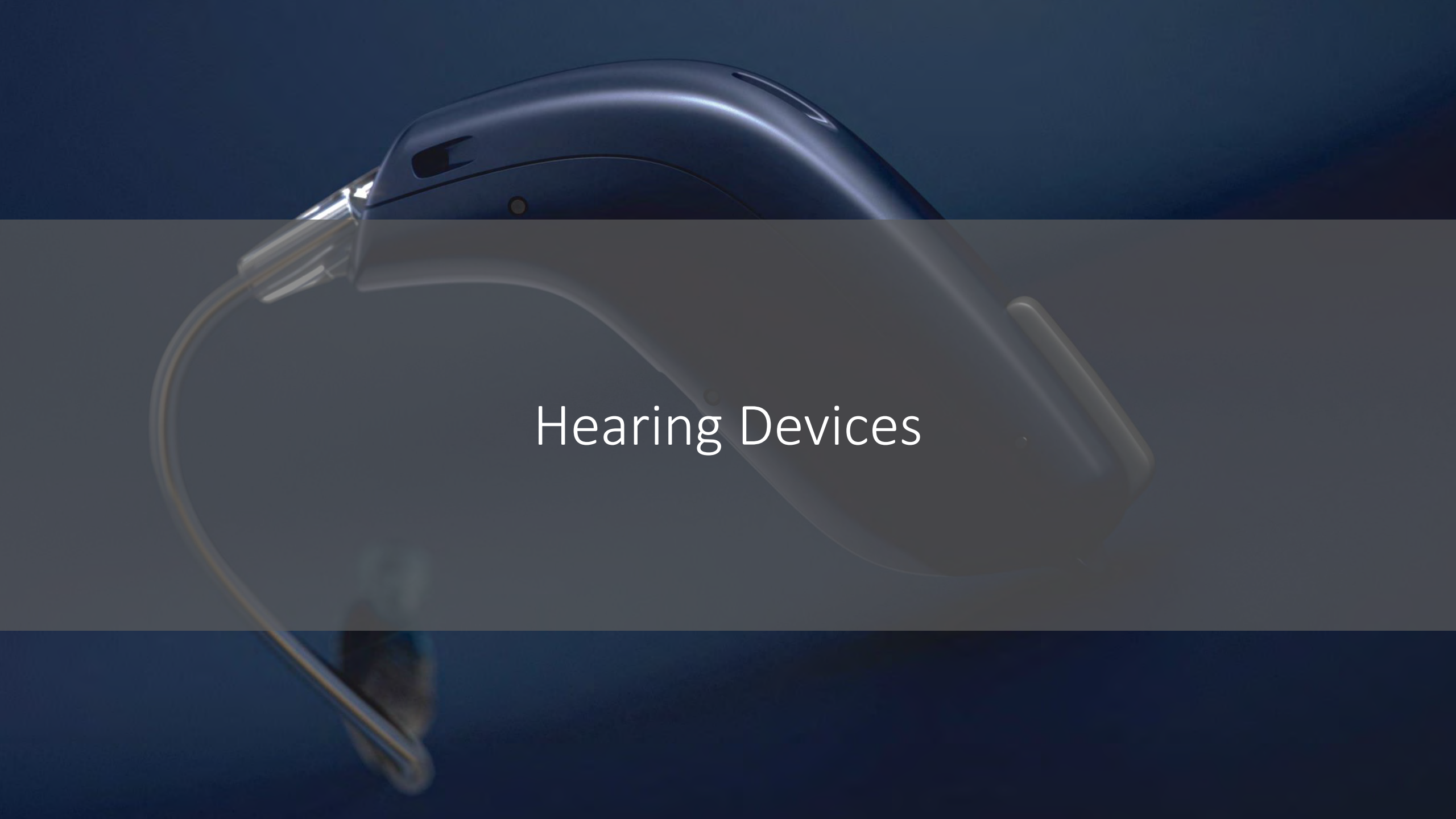
24% organic growth in Hearing Implants driven by innovative product launches

10% organic growth in Diagnostic Instruments across most geographies and brands

28%

EBIT increased by 28% to DKK 1,142 million, in spite of FX headwind of around DKK 70 million

EBIT guidance increased to DKK 2.3–2.6 billion from previously DKK 2.2–2.5 billion before restructuring costs of around DKK 175 million (previously DKK 200 million), despite the negative FX impact



Hearing Devices

Oticon

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Oticon Opn – the result of true product innovation

…and a unique combination of world-class audiology, 2.4GHz connectivity and rechargeability in one device!

Audiology	Connectivity	Rechargeability	eHealth
• **<u>Audiology the key parameter</u>** • Open sound paradigm vs. traditional directionality • NFMI ear-to-ear communication • Best-in-class	• 2.4GHz Bluetooth Low Energy-based connectivity • Direct streaming through Made for iPhone® interface • Audio streaming from all devices • Internet-connected devices (IFTTT)	• Improved flexibility for end-users • Interchange between rechargeable and disposable batteries • Upgrade of existing install-base	• Enabling closer relationship between HCP and end-user • Tool to improve efficiency in public systems • Real-time video integration • Current technologies still at early stages

Oticon Opn → **Trial**

Oticon BrainHearing™ Technology
Powered by Velox™

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Opn has introduced a paradigm shift in hearing care

“In the past 20 years, I’ve worked in this field, I never encountered such a big breakthrough.”
Roland Zweers, hearing care professional and Oticon Opn user

“I can’t remember that I was ever so enthusiastic.
Oticon Opn is a revelation.”
Henkjan Bosch, hearing care professional and Oticon Opn user

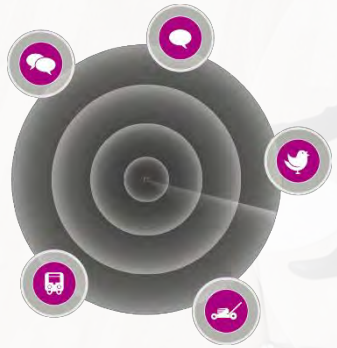
“I feel that listening is effortless.
I hear naturally without thinking about it.”
Valérie Leperchois, Oticon Opn user

“I feel like I’m alive again.
I can participate in all the discussions that I previously wasn’t a part of.”
Eugène Goetz, Oticon Opn user

The open sound experience

OpenSound Navigator™

Analyse



Balance

Noise removal

Snapshot more than 100 times/s in 16 channels to separate noise from the speech.

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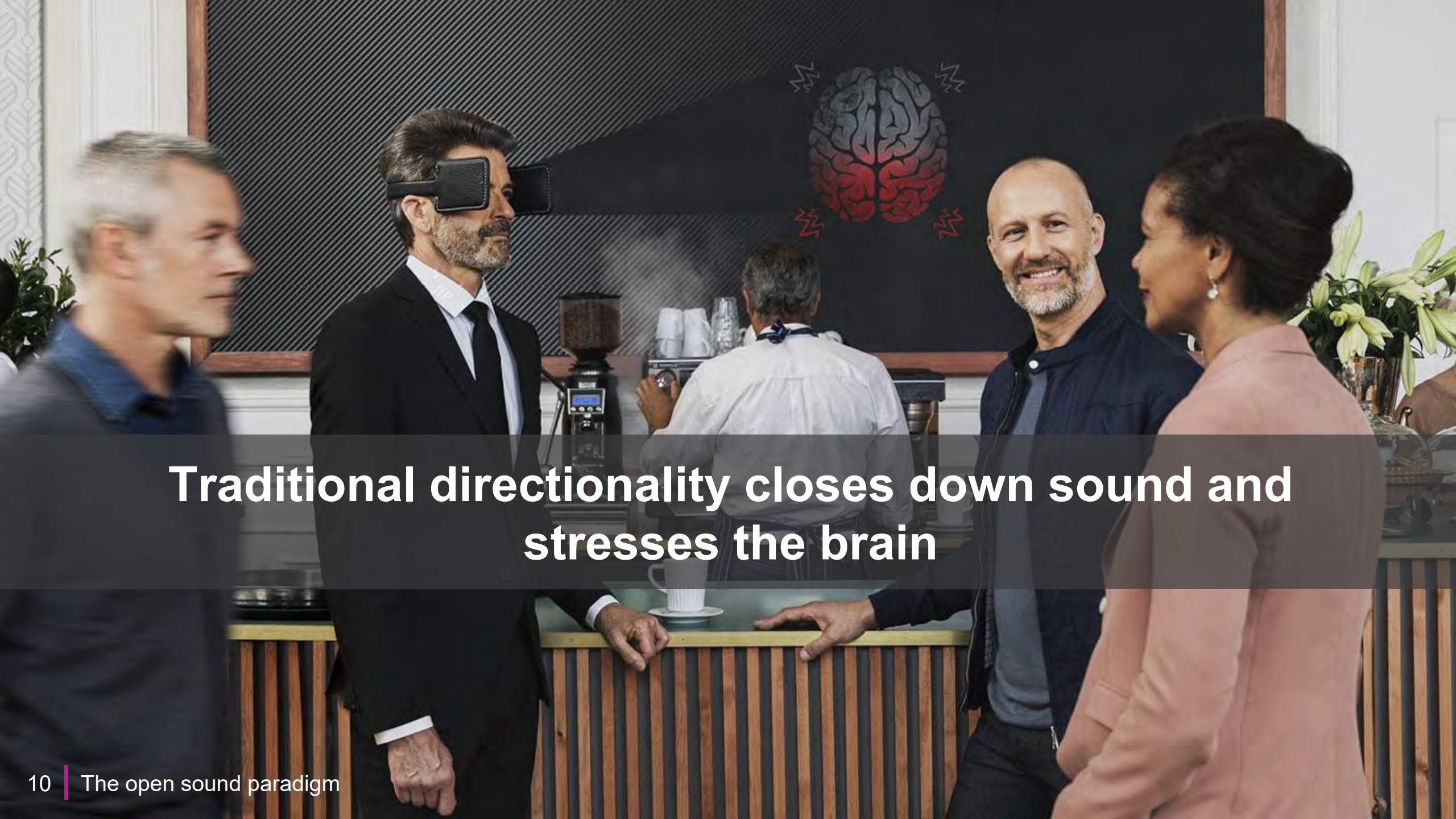
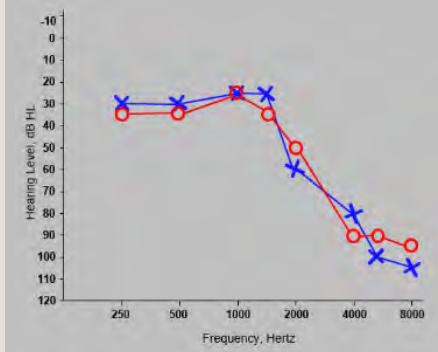


Traditional directionality closes down sound and stresses the brain

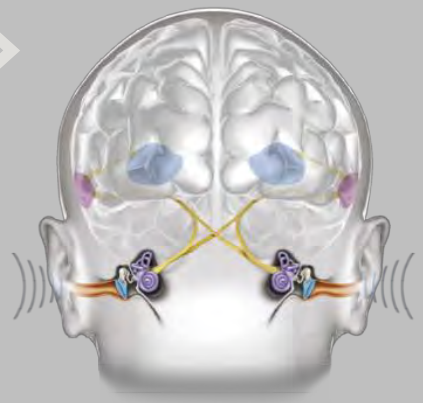
Consequences of an untreated hearing loss

Hearing loss is more than an audibility problem

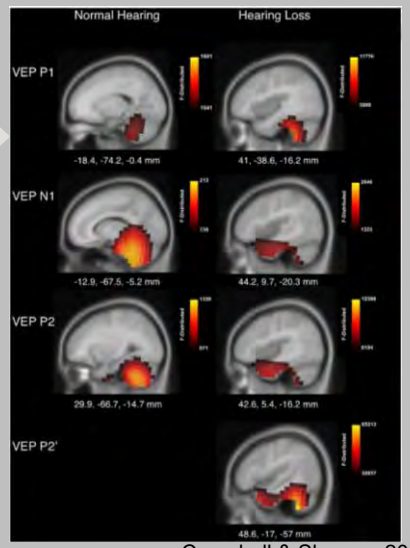
Hearing loss



Signals to the brain have lower quality

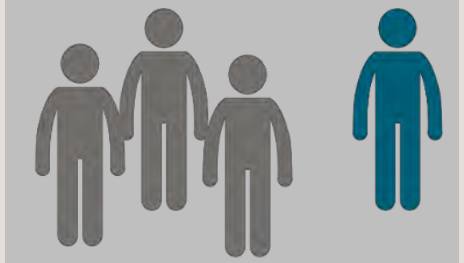


The brain will reconstruct and compensate



Campbell & Sharma, 2014

Fatigue and social withdrawal



Acceleration of health problems (e.g. depression and dementia)

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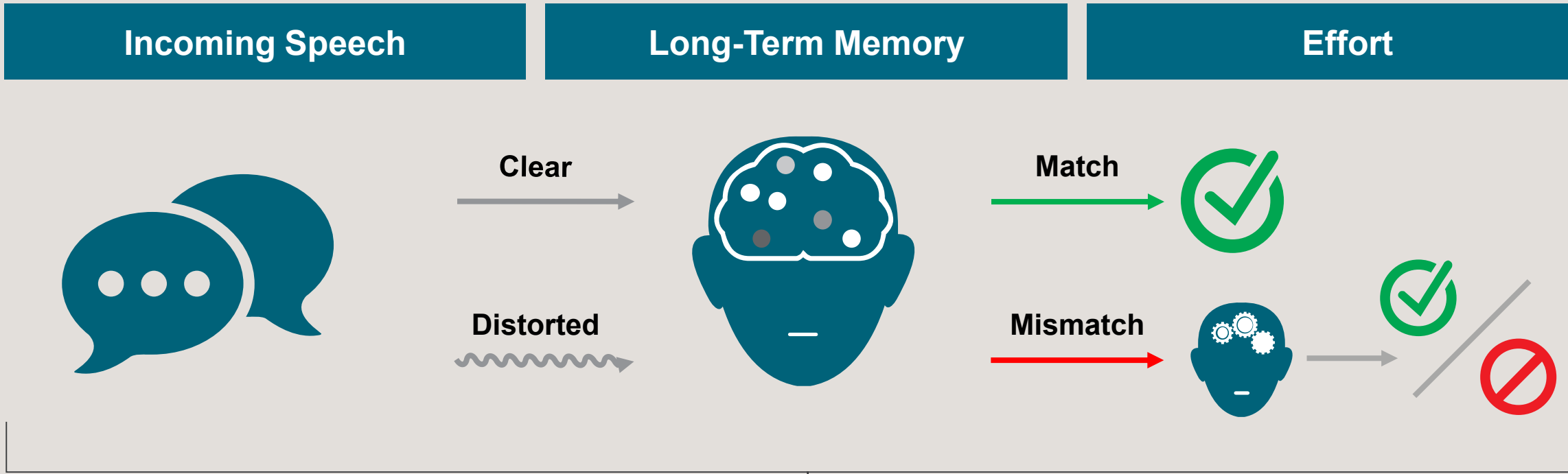
Hearing loss loads the brain

Listening becomes challenging when having a hearing loss



Listening effort for persons with hearing loss is higher than for persons with normal hearing

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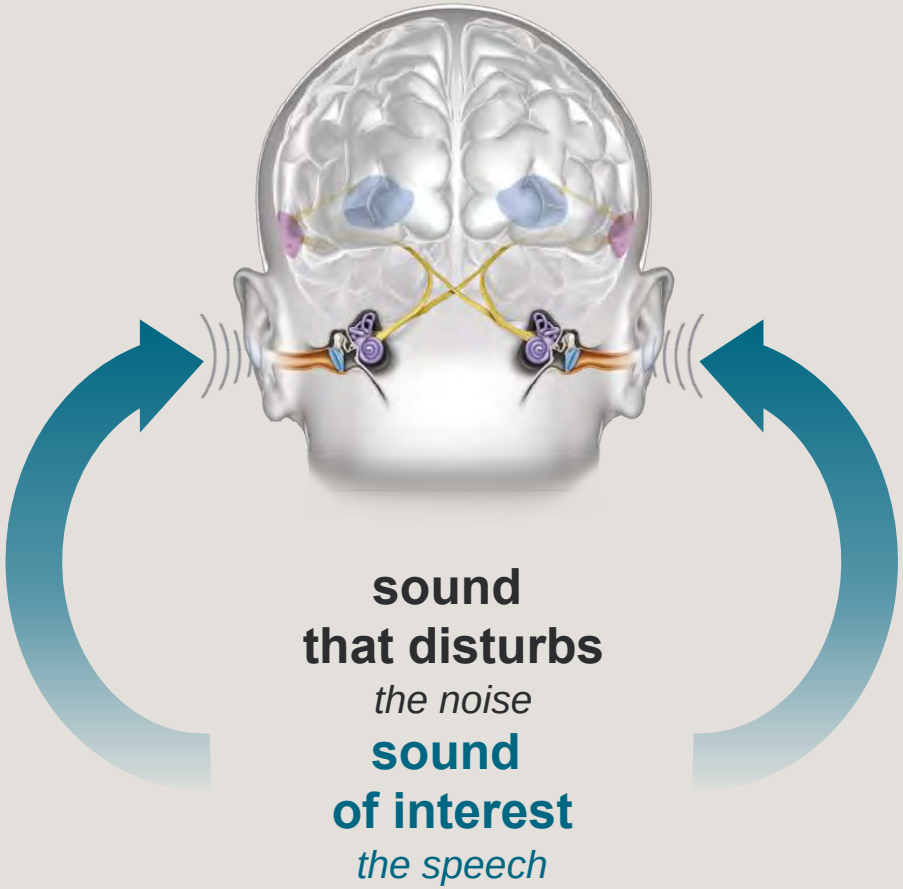
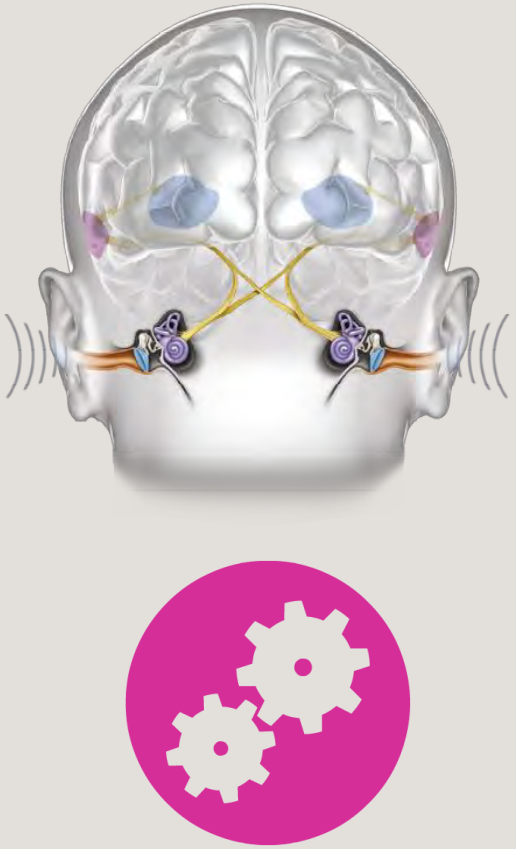
Hearing is a cognitive process

How to measure the benefits of hearing aids?

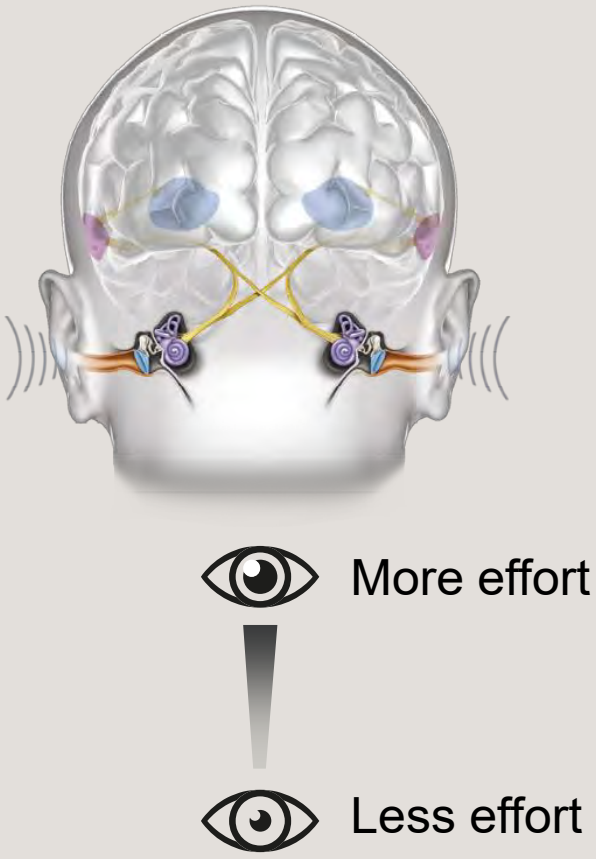
Incoming sound



Understanding



Effort and pupil dilation



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New evidence

Opn makes a profound difference to users in noisy situations

Test #1

Improving speech understanding in noise while reducing listening effort

Test #2

Better interaction with multiple speakers

Test #1

Improving speech understanding in noise while reducing listening effort

Study: OpenSound Navigator™ – understanding and effort

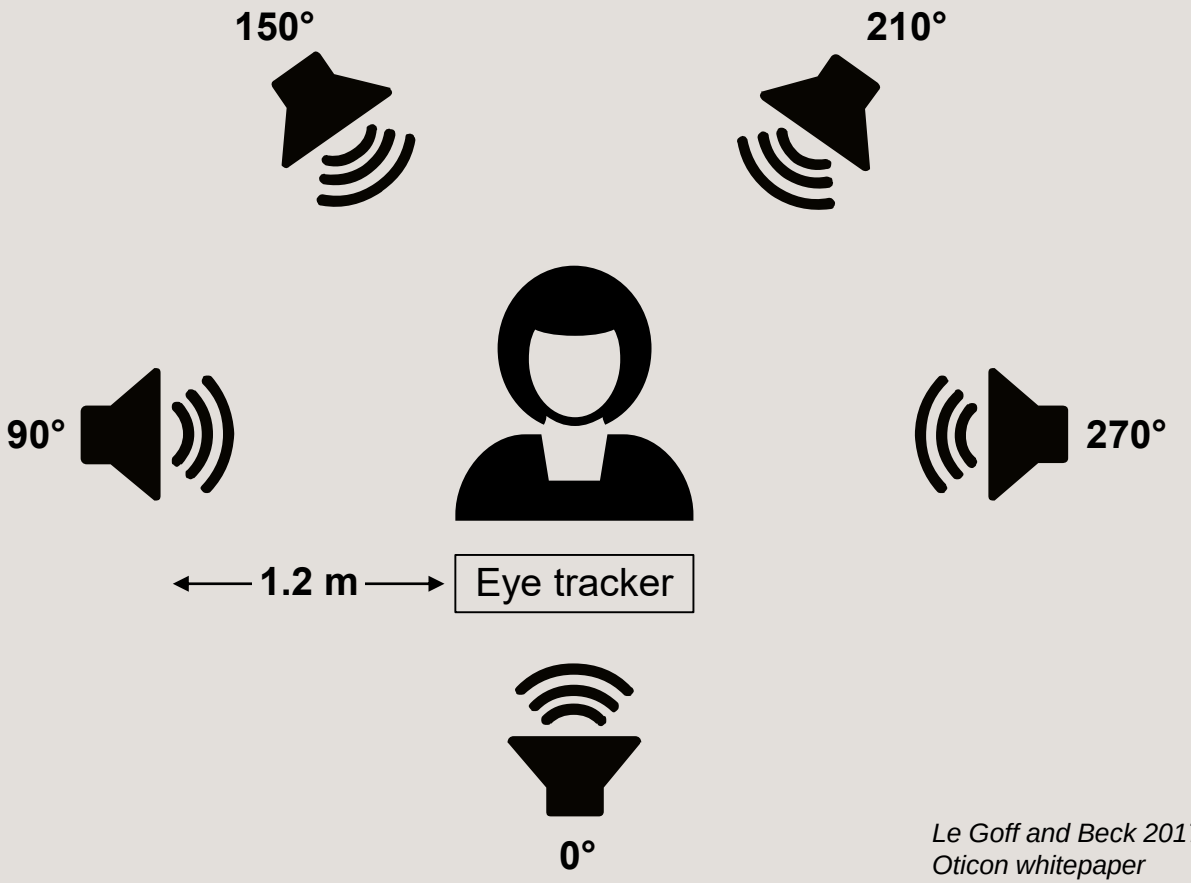
Background

Purpose:

Investigate the effect of OpenSound Navigator on speech understanding and listening effort

Participants:

- 24 participants with hearing impairment
- Mild to moderate hearing loss



Le Goff and Beck 2017, Oticon whitepaper

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Results

Speech understanding

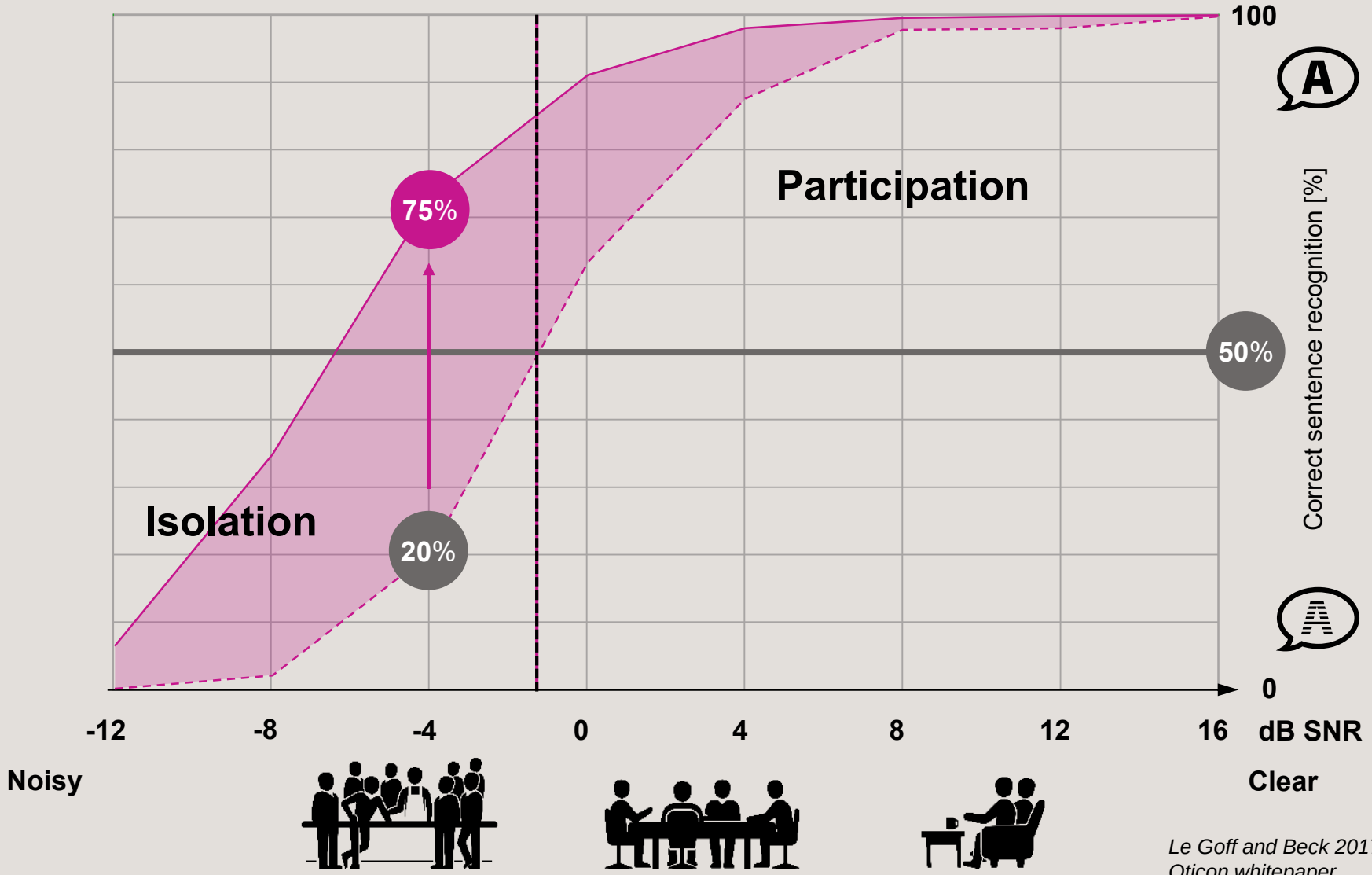
Speech recognition with well-fitted hearing aid

Speech recognition with OpenSound Navigator

Gained area

-5dB/4T OSN

-5dB/4T no OSN



Le Goff and Beck 2017, Oticon whitepaper

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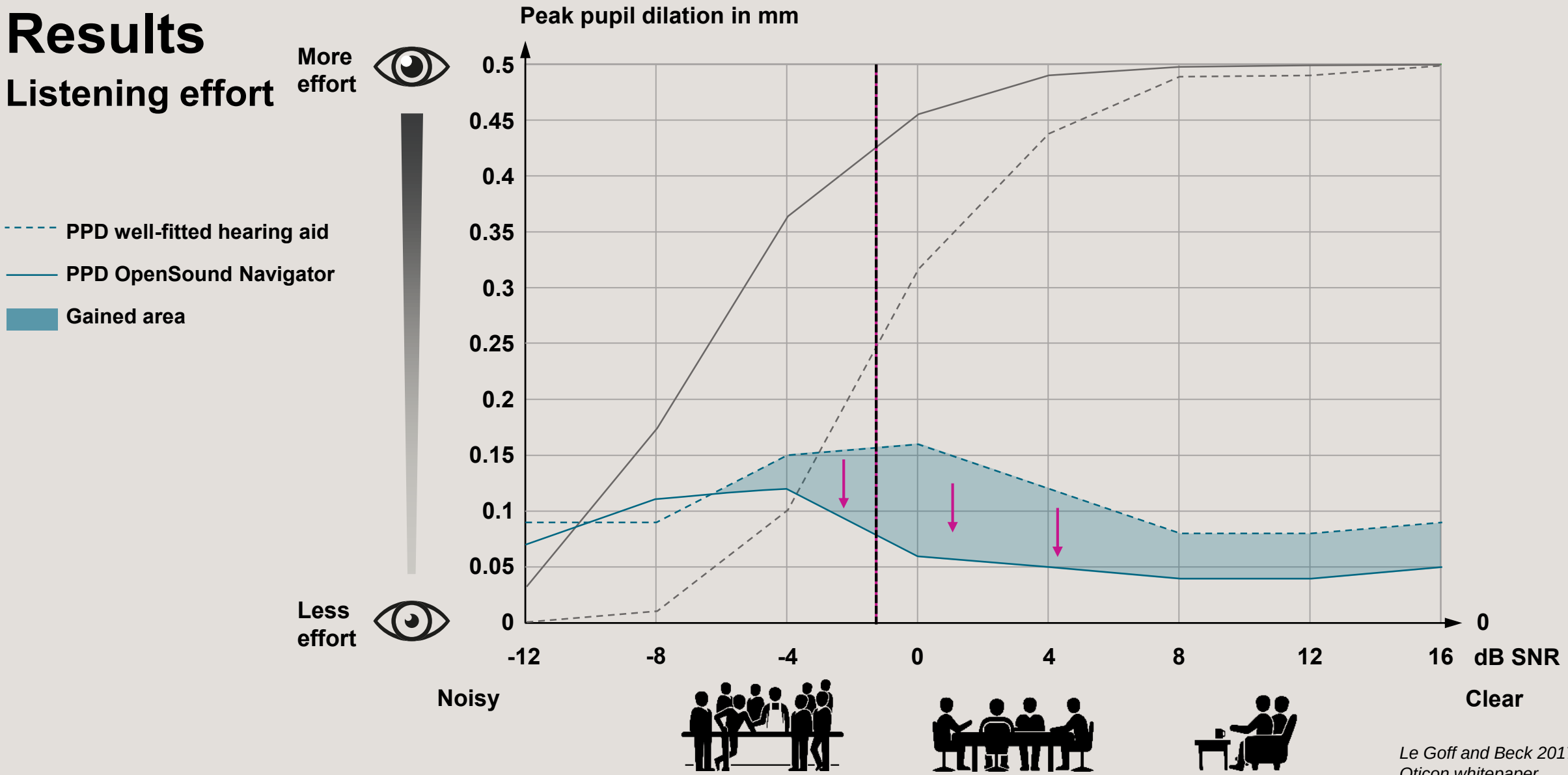
Results

Listening effort



Le Goff and Beck 2017, Oticon whitepaper

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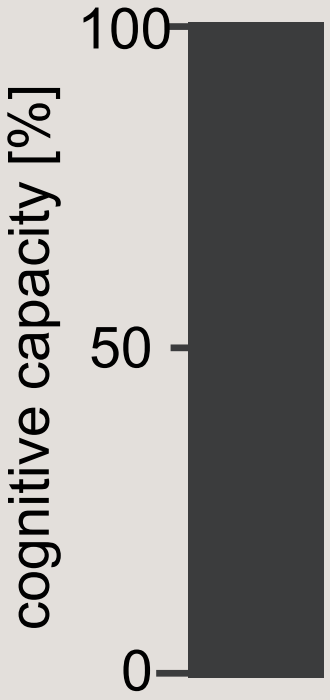
What does reduced cognitive load mean to clients?

Cognitive resources are released for other tasks



20% better memory recall

Le Goff et al. 2016

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Conclusions

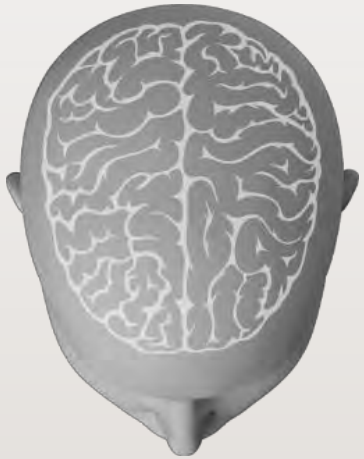
Comprehensive data show better and easier communication in noise

Improved speech understanding

even in the noisiest environments

Reduced listening effort

over a broad range of environments



Motivation and empowerment

to participate and engage

Le Goff and Beck 2017, Oticon whitepaper

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Test #2

Better interaction with multiple speakers

Study: Multiple speakers – communication in noise

A test representing real life communication between 4 people

Criteria:

- Uncertainty on the target speaker location
- Involve a certain degree of localisation ability
- Cognitive involvement

Study: Multiple speakers – communication in noise

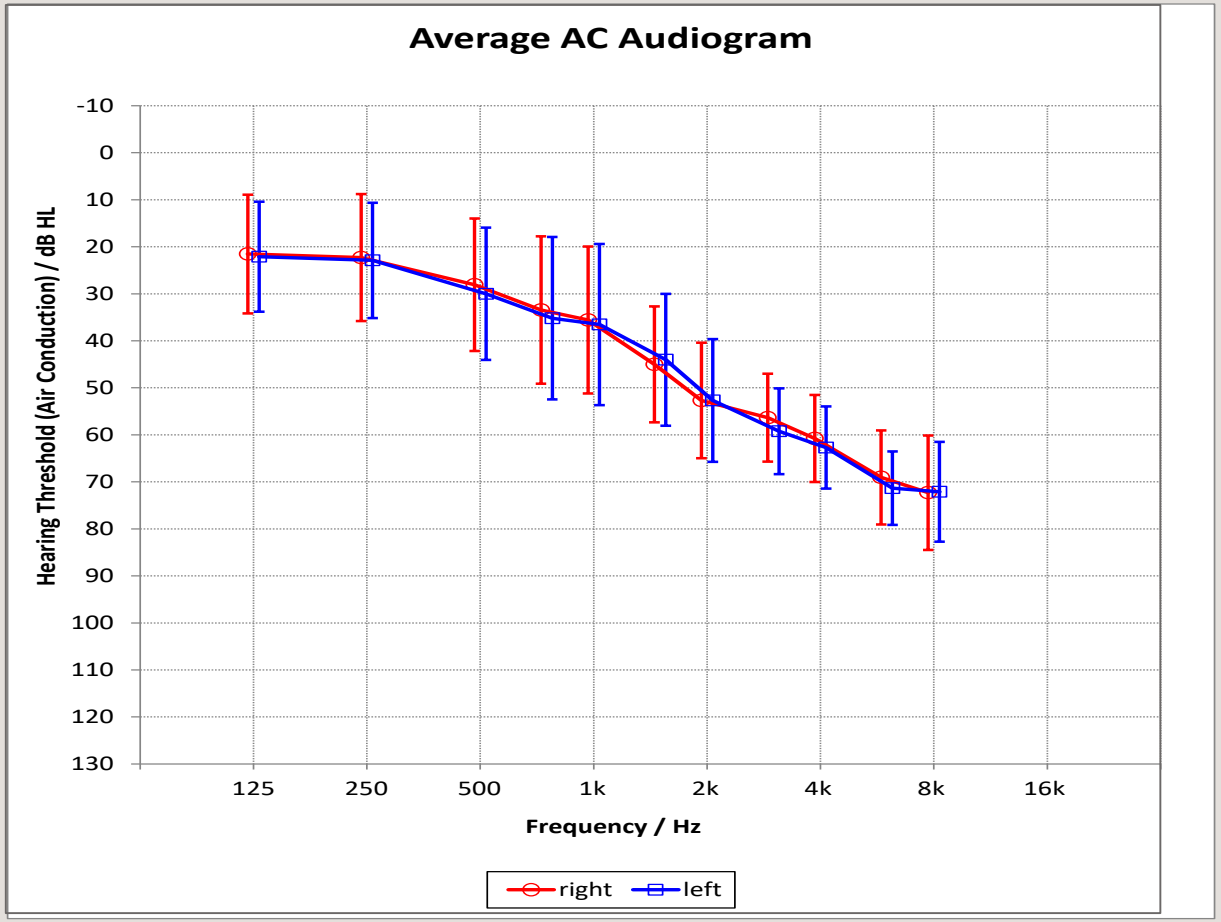
Background

Purpose:

Measure hearing aid benefits in a real-life noisy conversation with multiple speakers in an independent study

Participants:

- 25 participants with hearing impairment
- Mean age of 73 years
- Mild to moderate hearing loss



Le Goff & Beck, 2017

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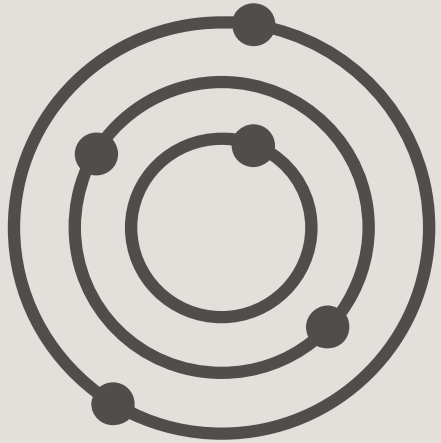
Study: Multiple speakers – communication in noise

Comparing 3 technologies

Directionality

Narrow directionality

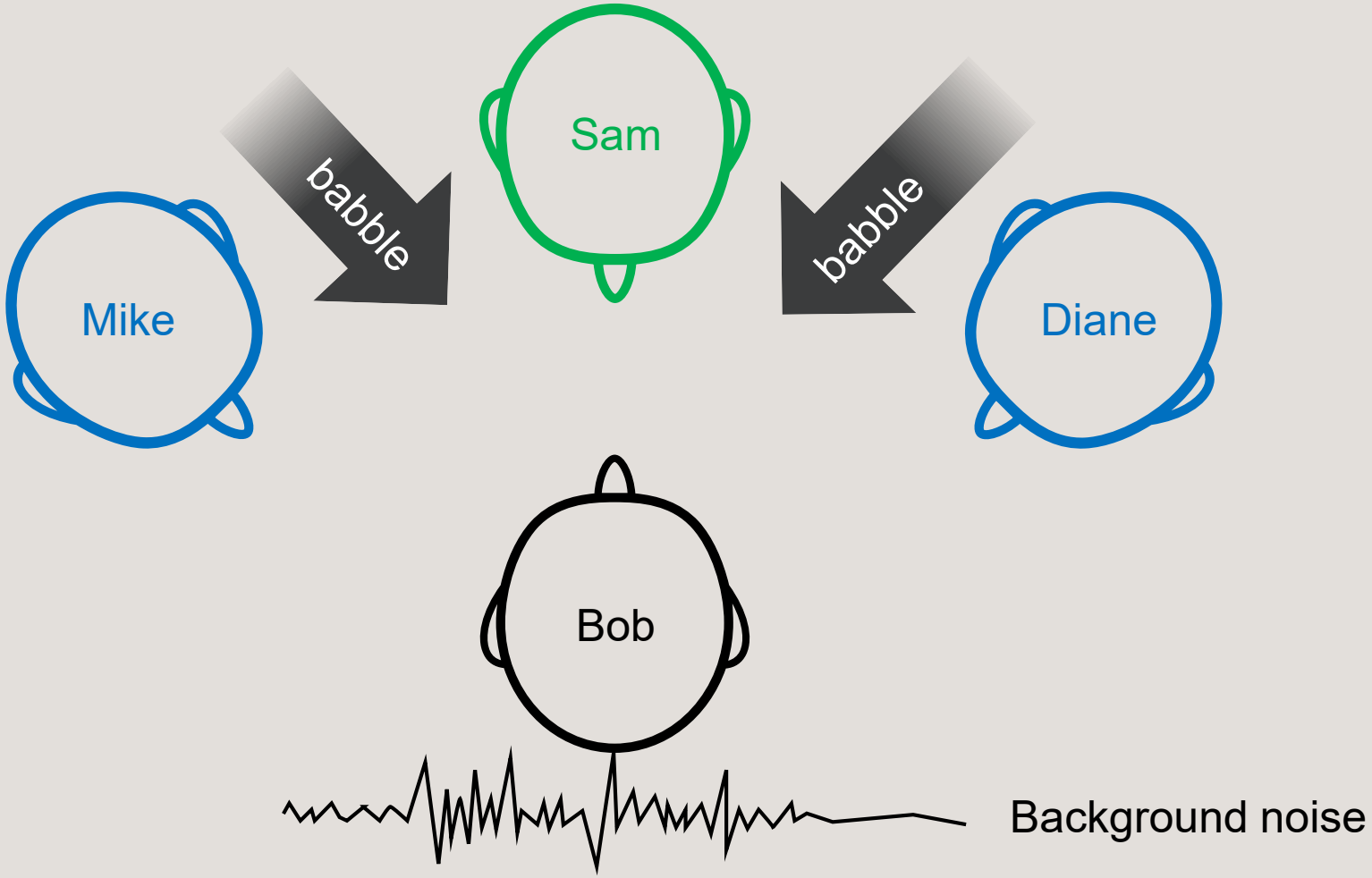
OpenSound Navigator



Which technology is best?

Study: Multiple speakers – communication in noise

Test setup



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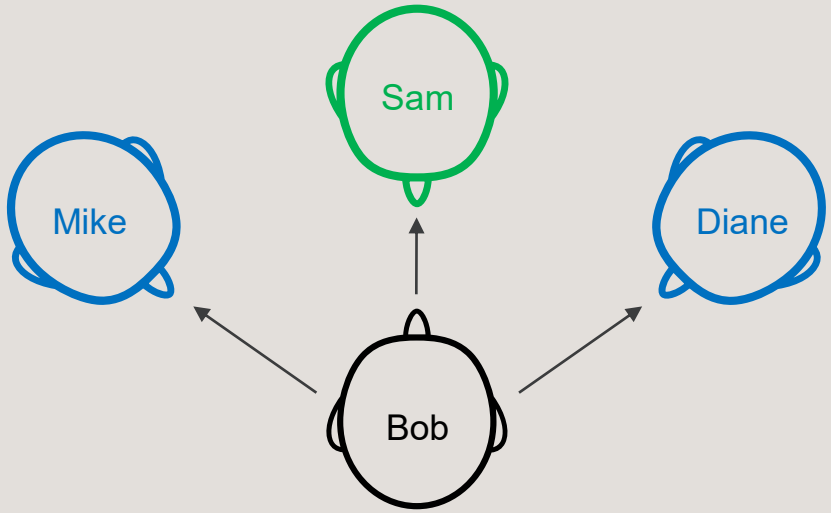
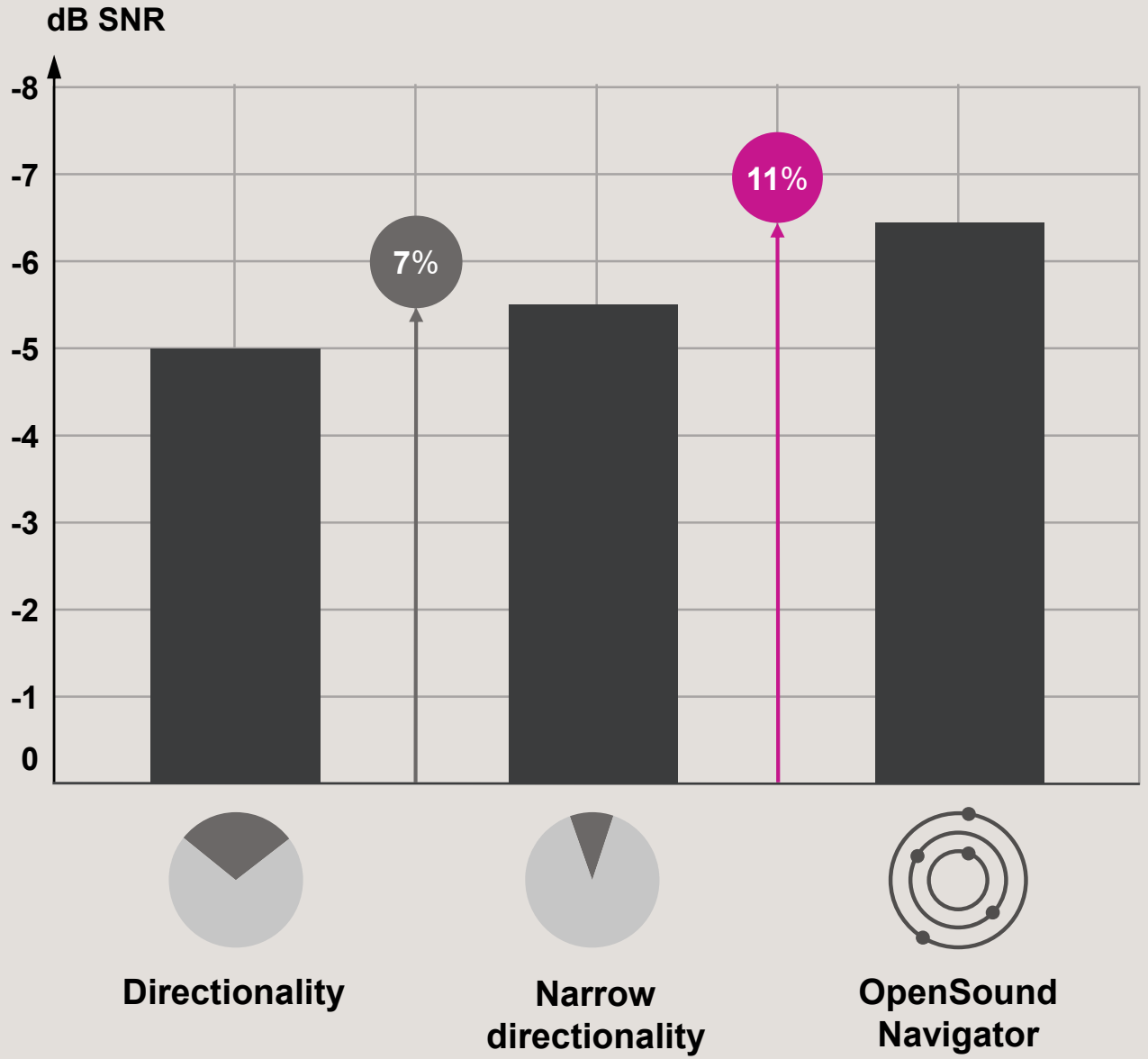
Results

Average speech understanding of 3 speakers





Le Goff and Beck, 2017

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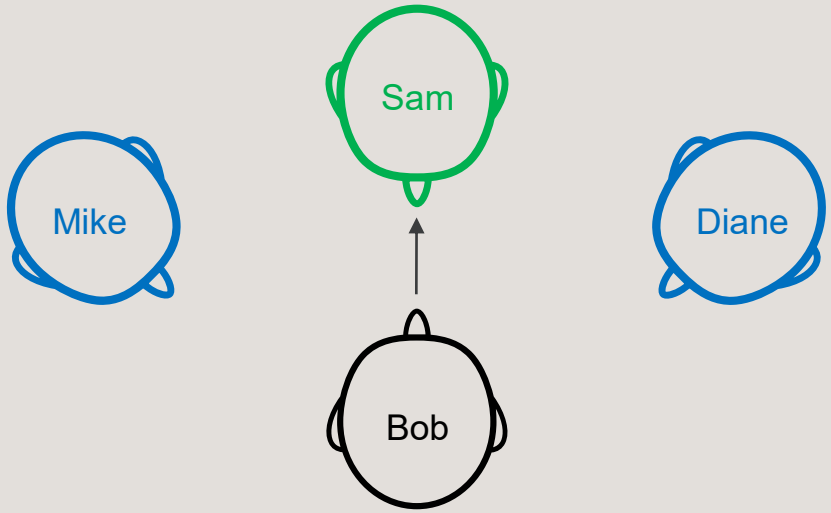
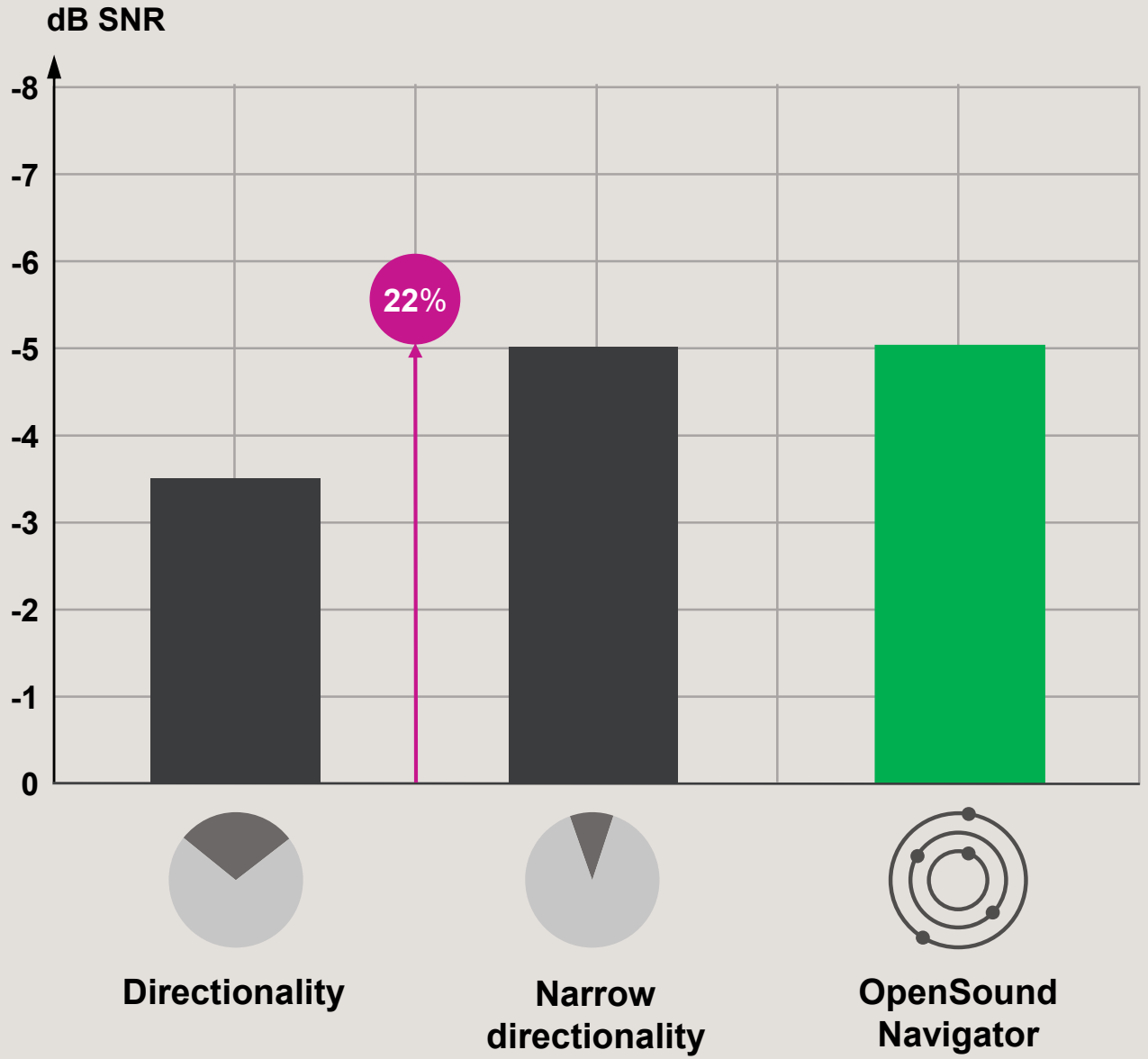
Results

Speech understanding of centre speaker (Sam)





Le Goff and Beck, 2017

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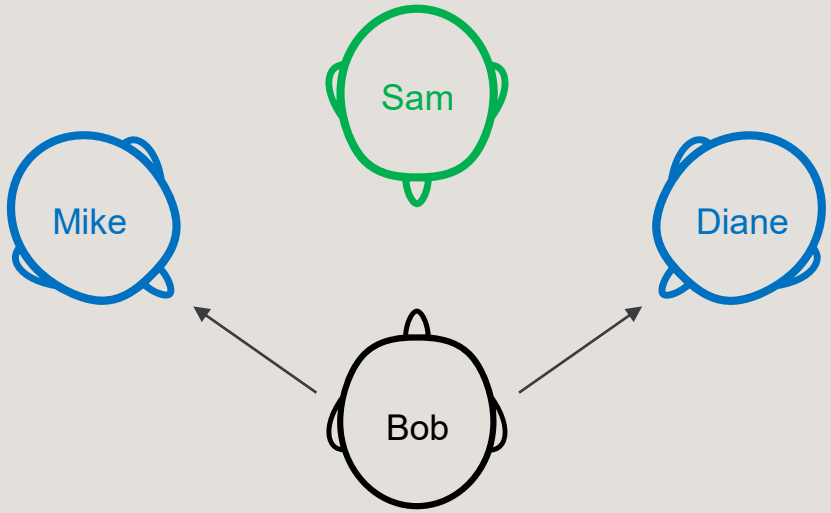
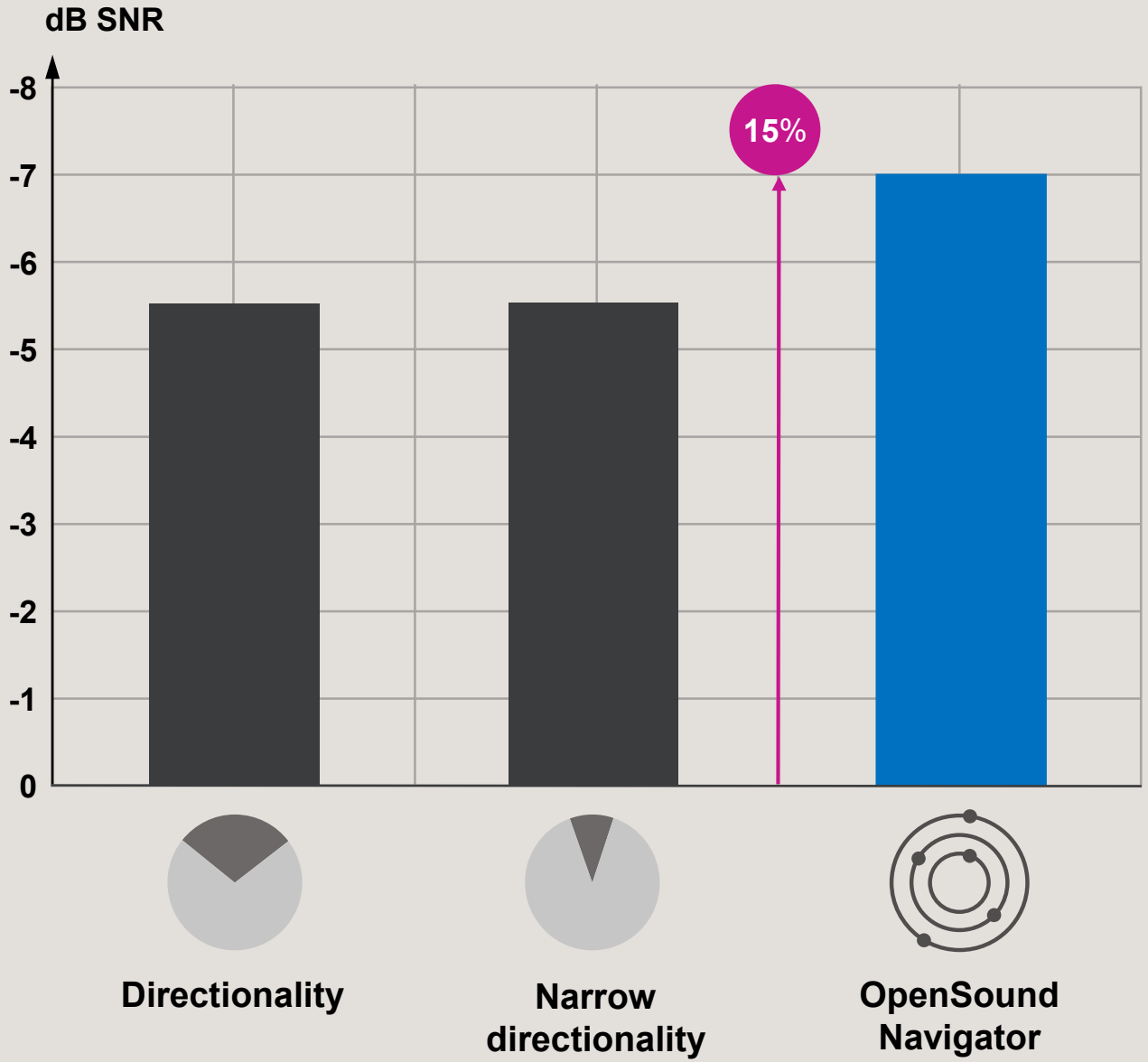
Results

Average speech understanding of speakers from sides (Mike and Diane)





Le Goff and Beck, 2017

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Conclusions

Directionality as we know it is now a thing of the past

OpenSound Navigator outperforms other directional technologies in a realistic setting

The higher speed and accuracy means accurate and powerful noise reduction

No need of narrow directionality technology - benefits are only in predictable environments

Introducing stereo streaming from all smartphones

Overcoming the limitations of Classic Bluetooth

Oticon Opn with 2.4GHz BLE enables:

- Streaming in stereo to both ears
- High-quality sound thanks to extended frequency range (7.5 kHz)
- Low battery consumption
- Made for iPhone® (MFI)

Industry standards coming for Bluetooth Low Energy audio streaming standard

Outstanding connectivity to any modern smartphone

2.4GHz BLE streaming of all types of audio to both ears

- High quality streaming in stereo
  - Hands-free phone calls
  - Music
- Hassle-free and efficient connection to any modern smartphone
  - iPhones: Made for iPhone®
  - Other smartphones: High-quality streaming with ConnectClip
- No compromises on audiology, rechargeability or hearing aid size

Introducing the Oticon ConnectClip

- Multi-function in one device
  - Wireless headset
  - Remote microphone
  - Basic remote control
- Velox platform and OpenSound Navigator™
  - Streams clear speech
  - Free from unwanted noise in phone conversations
- Elegant and discrete design

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Make any Opn miniRITE rechargeable

Now in even more countries

The only rechargeable hearing aid with an **open sound experience**

Hybrid battery technology for maximum flexibility – powered by ZPower

Upgradable solution:
Turn any Opn miniRITE into a rechargeable hearing aid

The world's first rechargeable hearing aid with **2.4 GHz direct streaming**

eHealth - an emerging agenda

Enabling a closer relationship between hearing care professionals and end-users

- Ongoing work with **large-scale government systems**
- **Real-time video interaction** needed to provide extended service to end-users
- **Integration with fitting software** required for full suite of services
- **Direct interaction with a hearing care professional** remains key for ensuring trust, professional care and strong outcomes for end-users
- **Trials are ongoing and progressing well**

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New fitting features

- New fitting features:
  - New paediatric fitting mode
  - NoahLink wireless with updated fitting software and fast data view
  - New in-situ audiometry

Noahlink Wireless

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New releases complement recent Oticon Opn launches

Broadening the reach of the open sound paradigm

Launch kicked-off in June, practical introduction in Q3:

- **Rechargeability**
- **New styles**: BTE13 PP and miniRITE-T
- **New features**: Tinnitus and Speech Rescue

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Zerena 9|7|5

THE NEW DYNAMICS OF HEARING CONTINUES…

bernafon

Your hearing · Our passion

Zerena 9|7|5: A breakthrough in Technology

Seamless and boundless hearing. Anytime, anywhere.

- Superior speech understanding in active, fast-changing situations
- Small and attractive design
- Made for iPhone® and 2.4 GHz streaming to all phones with SoundClip-A without compromises
- Ear-to-ear NFMI communication

Dynamic Environment Control System DECS™.

- Analyses 32,000 data points of the listening environment per second
- Ultra-fast and precise updates of the binaurally coordinated Dynamic Directionality™ and Dynamic Noise Reduction™
- ChannelFree™ amplification 20,000 times a second

Dynamic Environment Control System: DECS™

bernafon
Your hearing · Our passion

Zerena 9|7|5: Great market acceptance

- Introduction in largest markets completed
  - Excellent feedback about product performance, connectivity features and efficiency of the fitting software Oasis^{nxt}
- Introduction in some export markets in progress
- Costco: launched in USA/Canada, additional countries following

➢Clinically proven user benefits confirmed by hearing care professionals and users

1. Significantly **improves speech understanding** in noisy and dynamic listening situations. This makes conversations easier to follow.
2. Provides **maximum comfort in highly noisy places**. This makes sound more natural and less loud.
3. **Reduces listening effort** so users can focus on hearing what's important to them. This makes busy places less tiring.

*Bernafon (2017) Dynamic Amplification Control, Topics in Amplification, Sept. 2017
*Bernafon (2017) Benefits of dynamic amplification control in complex listening environments, White Paper, Sept. 2017

bernafon
Your hearing · Our passion

New Zerena features

New

- Z-Power rechargeable Silver-Zinc batteries

- SoundClip-A, 2.4 GHz binaural audio streaming and hands-free phone calls to all phones

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Your hearing · Our passion

SoundDNA Technology

SONIC
Everyday Sounds Better

Sonic Enchant 100|80|60: Status

- International roll-out ongoing
- SoundDNA technology extremely well received

➢ Upcoming news:

  - Wireless connectivity solution for all phones with SoundClip-A
  - MiniRite rechargeable with Z-Power solution

Hearing Implants

Because
sound matters

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History of Oticon Medical

Bone Anchored Hearing Systems (BAHS)

2007
Oticon Medical established in Gothenburg, Sweden

2009
Launch of the Ponto System – bringing digital sound quality to BAHS

2011
Ponto Pro Power
- the first bone anchored digital power processor

2012
Wide Ponto Implant
- the industry's largest bone-to-implant contact

2013
Oticon Medical/WDH acquires Neurelec

2013
Ponto Plus & Ponto Plus Power
– the first and most powerful family of processors with wireless connectivity

2014
14mm OptiFit™ abutment
– the most extensive abutment family for all skin thicknesses power processor

2015
Minimally Invasive Ponto Surgery (MIPS)
– a truly new perspective on tissue preservation

Ponto BHX Implant
– bone bonding, the next level of osseointegration

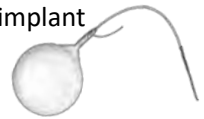
2016
Ponto 3 family
– The world's most powerful family of abutment-level sound processors

Cochlear Implant Systems (CI)

1976
First multi-channel cochlear implantation in France by Prof. Chouard

1977
Development and production of cochlear implants established in Nice, France

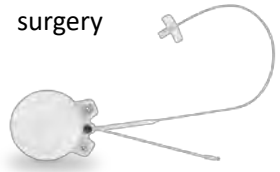
1992
Digisonic DX10
– the first digital multi-channel cochlear implant



2001
Digisonic BTE
– our first BTE sound processor

2004
Digisonic SP
– 20 channel implant

2006
Digisonic SP ABI
– for brainstem surgery



2012
Digisonic® SP EVO
– the atraumatic electrode array to preserve residual hearing

2013
Saphyr Neo Collection
– better speech understanding in noise with Voice Track & Crystalis XDP

2015
Launch of the Neuro System
Neuro Zti implant – an ultra-compact design with a powerful and future-proof technology

Neuro One sound processor
– Oticon technology inside, designed for better speech understanding

Today
Neuro 2
– Where sound meets design

Ponto 3 SuperPower

- The world's first and most powerful abutment-level super-power sound processor

- Highest output ever
  - utilizes the patients' capability to hear better
  - best audiological solution to **any** bone-anchored patients

- A paradigm shift

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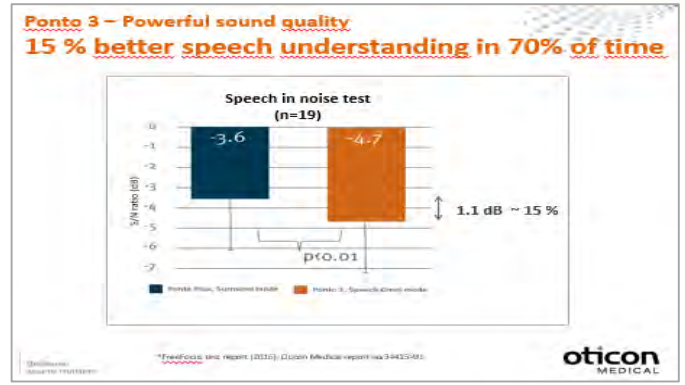
Ponto 3 SuperPower – clinical results

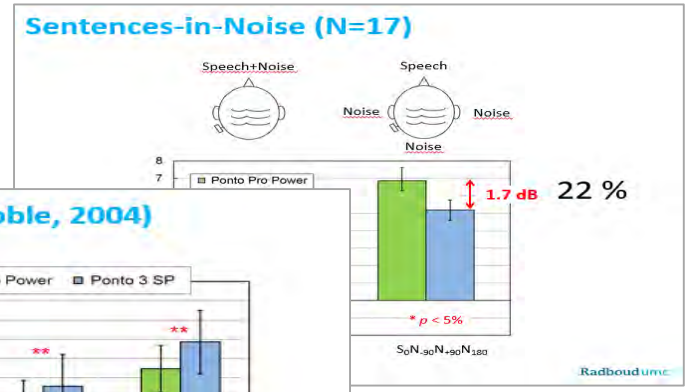
- Study conducted by

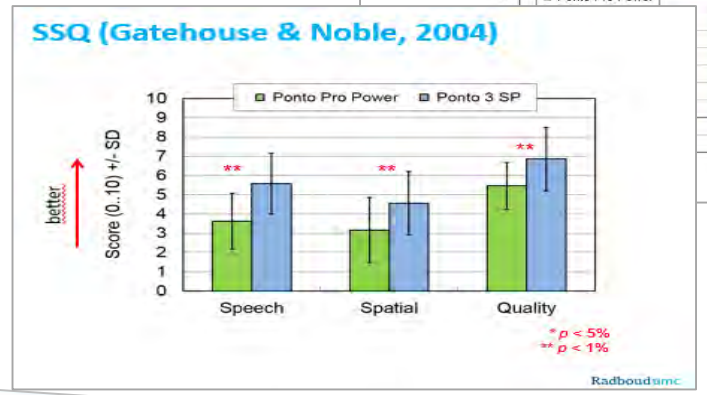
A Bosman et al,
Radboud University Medical center,
Nijmegen

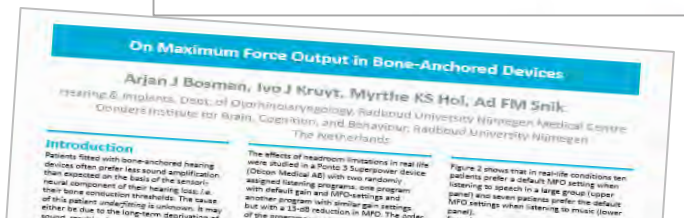
  - Experienced BAHS subjects (N=20)
  - Ponto Pro Power (N=19), Baha Intenso (N=1)

- Results
  - 22 % increased speech understanding
  - Sign. improved subjective outcome
  - All preferred P3SP









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Neuro 2

Where sound meets design

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Neuro 2

Design excellence – the smallest BTE ever

Slim where it matters the most!

oticon MEDICAL UNIQUE

reddot award 2017
winner

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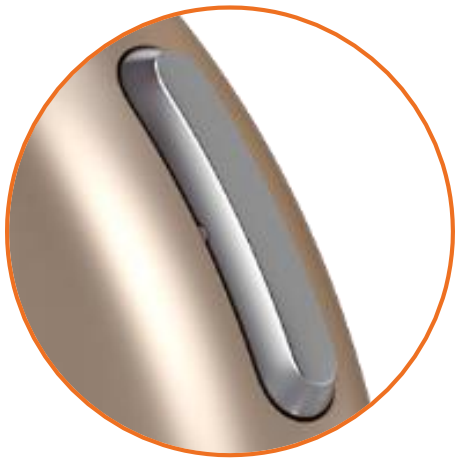
Neuro 2

Design excellence

Integrated
light indication

Discreet
microphones



Aluminium
dual push button

Integrated
Battery lock

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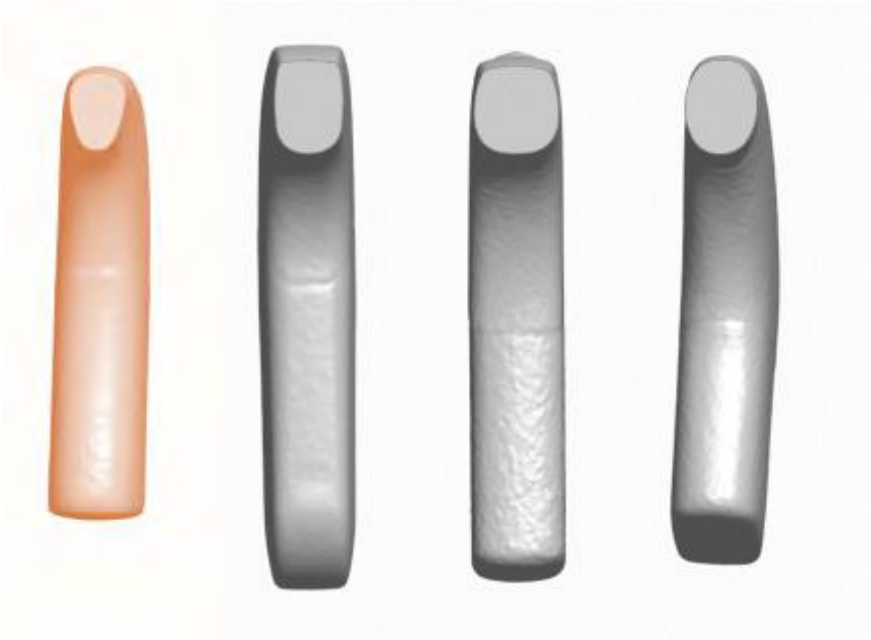
Neuro 2

Design excellence – dimensions



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Neuro 2

Design excellence – blend in or stand out?

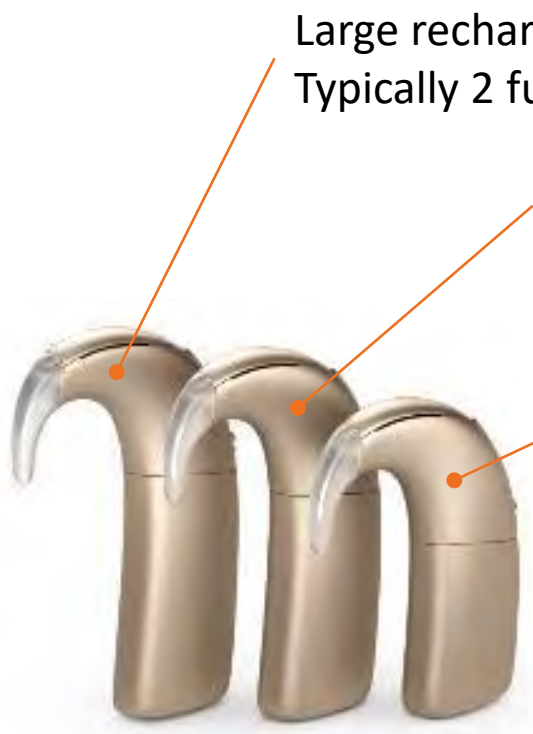
Discreet
skin and hair colours

Matching
Oticon colours

Proud
modern colours

Neuro 2

Easy to use and rely on – battery lifetime



In real life conditions[1]

[1] Battery life indications reflect real life conditions as they have been tested with typical fitting parameters and with constant speech signals in accordance with international standard*. This way we assure that it is not just best case performances.

*ANSI/AAMI CI86:2017 Cochlear implant systems: Requirements for safety, functional verification, labeling and reliability reporting

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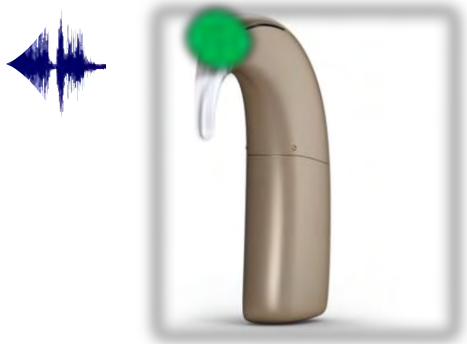
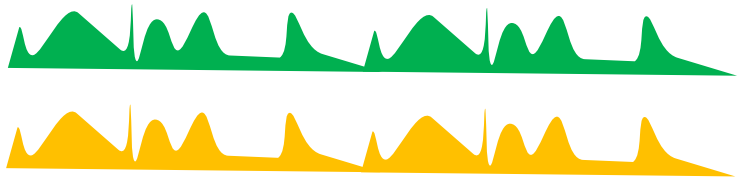
Neuro 2

Voice activated self check - « how are you »





OK

Mic issue

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Neuro 2

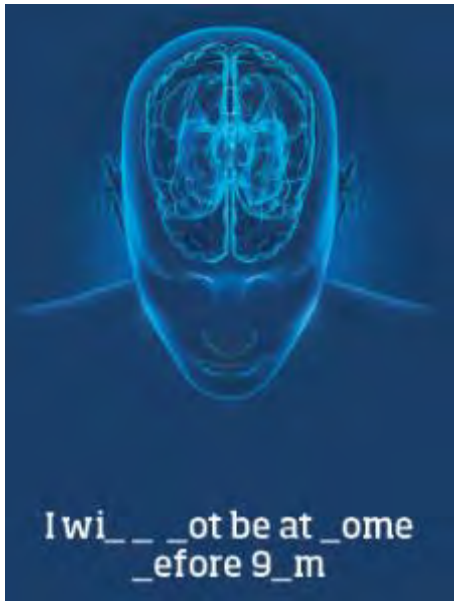
BrainHearing™ – making sense of sound

Neuro is designed to provide sound details for easier listening

Neuro 2

BrainHearing™ – making sense of sound

Listening gets harder when details are missing



Every speech cue counts!

Less energy spent on listening

More energy for everyday life

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Neuro 2

BrainHearing™ – making sense of sound

Coordinated Adaptive Processing (CAP)
designed to automatically deliver undistorted speech in the widest range of listening situations

Powered by the
Inium Sense platform

Matching style and sound

Bimodal - Neuro 2 with Dynamo or Sensei SP

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Neuro 2

Bimodal – BrainHearing™ is the foundation

Dynamo
Sensei SP

Cosmetic fit

Shared connectivity

Balanced listening experience

Helping the brain make sense of sound - BrainHearing™

Neuro 2

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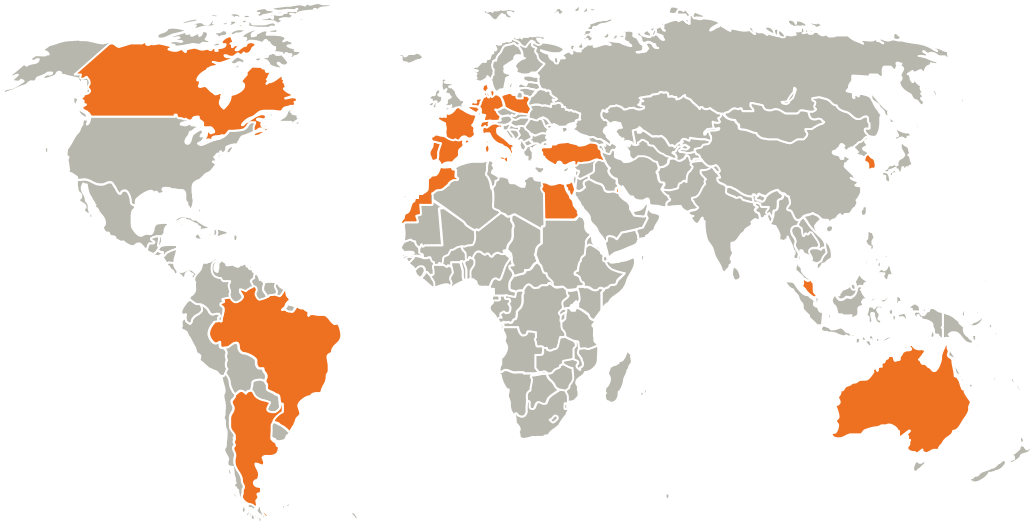
Neuro – Significant progress through excellent outcomes

More centers and more geographies – and growing

- Brazil active from Q2 2017
- Argentina active from Q3 2017
- Australia active from Q4 2017
- FDA patient inclusion to be completed before year-end
- Strong base established for Neuro 2 launch



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Outstanding reliability data for Neuro Zti

References

1. ISO 5841-2. Implants for surgery — Cardiac Pacemakers — part 2: Reporting of clinical performance of populations of pulse generators or leads. Geneva (Switzerland): International Organization for Standardization. 2014.
2. European consensus statement on cochlear implant failures and explantations. Otol Neurotol. 2005 Nov; 26(6): 1097-9

Read more at:

https://www.oticonmedical.com/for-professionals/cochlear-implant/reliability-report

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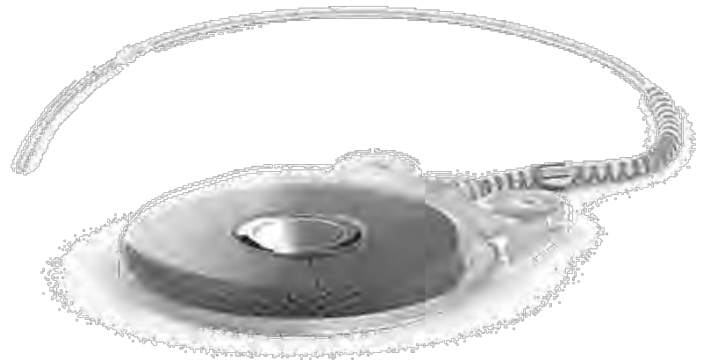
COCHLEAR IMPLANT SYSTEM

The Neuro System –



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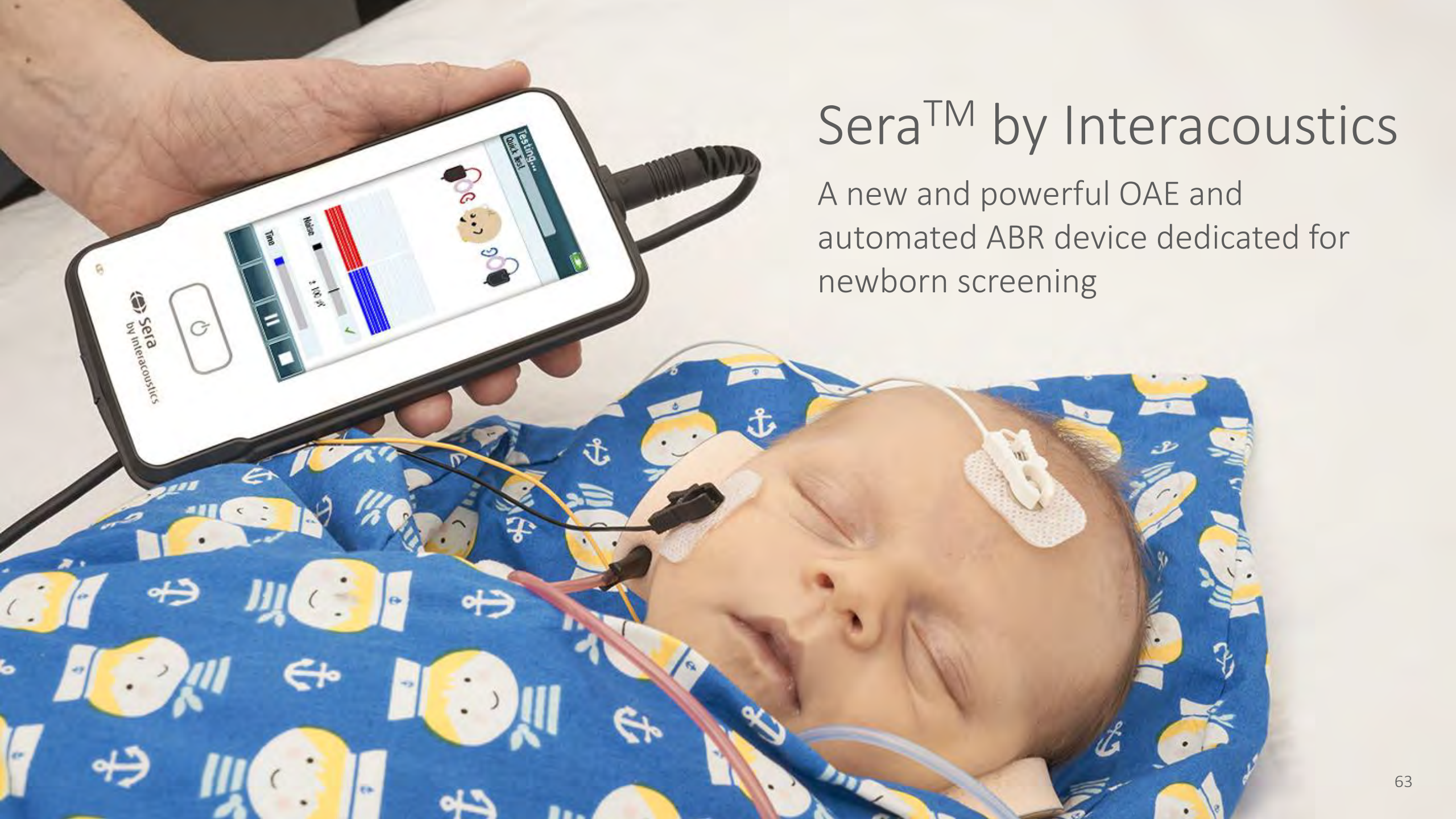
Diagnostic Instruments



Sera™ by Interacoustics

A new and powerful OAE and automated ABR device dedicated for newborn screening

Affinity$^{2.0}$ and Callisto™

A complete solution for fitting hearing aids, a client-centered process that starts with audiometry and ends with a satisfied client.

New MA 28 screening audiometer from MAICO

Air conduction & bone conduction audiometry made portable

MAICO

William Demant

A strong platform for future growth

… and a vision to make **a life-changing difference** to people living with hearing loss

William Demant

Q&A

Next up:

Interim Management Statement will be released
Thursday, 9 November 2017

William Demant

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