

MOSAICS - Hearing Matters

European Industrial Doctorate to train experts in auditory implants
for minimized outcome spread and maximized participation in society

Filiep Vanpoucke, Head Algorithms & Applications

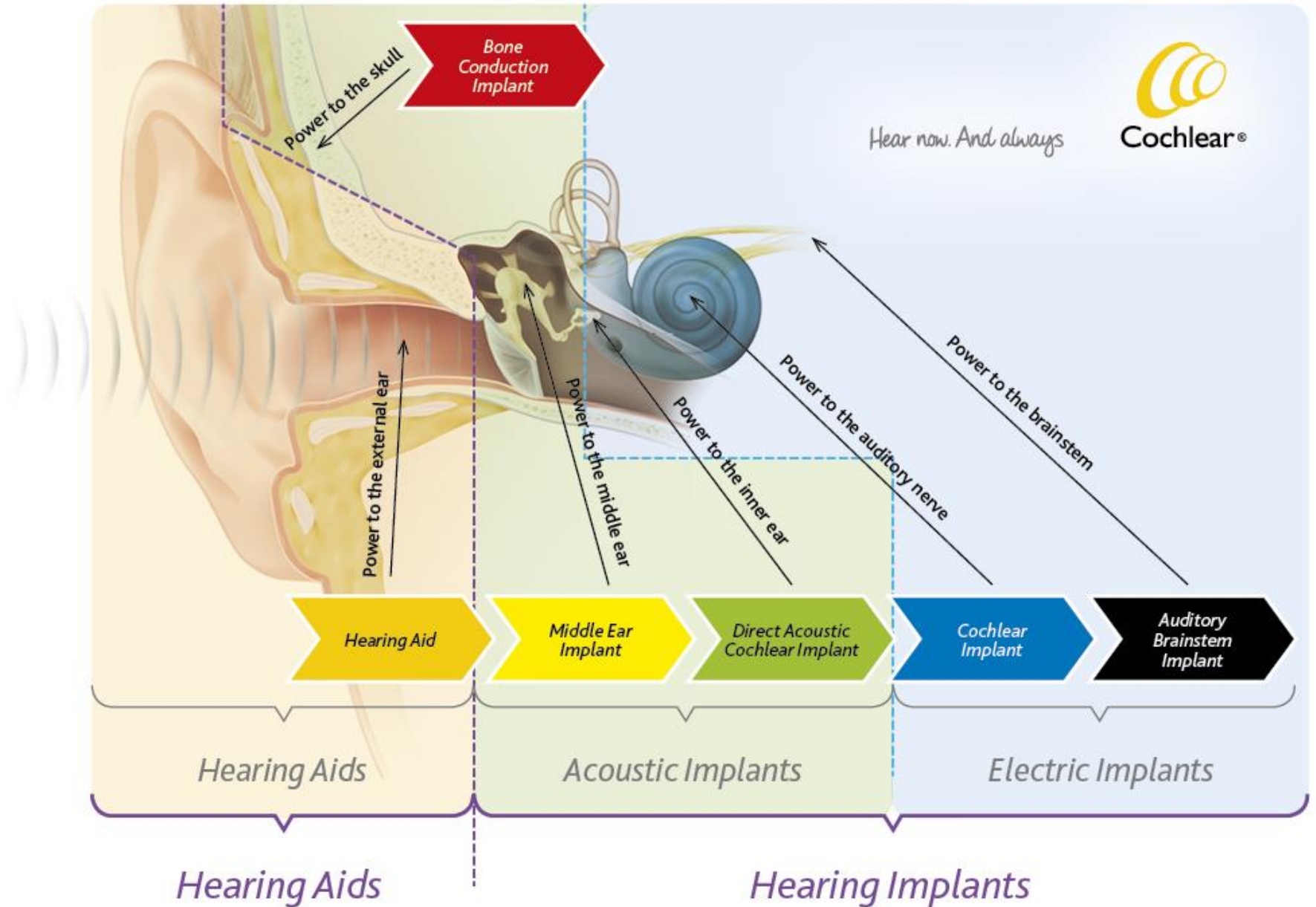
Birgit Philips, Senior Research Audiologist

24/Jun/2019

Hear now. And always



Hearing Solutions



Cochlear Limited (ASX:COH)

The global leader in implantable hearing solutions

Cochlear/Hybrid implants Bone conduction implants Acoustic implants



Cochlear in Belgium (Mechelen)



- Established in 2000
- Employs ~ 120 staff
 - Cochlear Technology Centre (CTC)
 - Cochlear Benelux: sales & support
 - Cochlear Academy (EU training centre)



Origin of Cochlear Technology Center



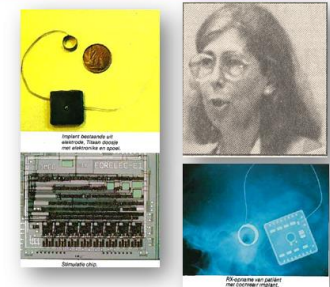
Milestones

1979

CI research started at University of Leuven, St-Augustinus Hospital Antwerp, University of Antwerp:
Leuven Antwerp University and Research Auditory prosthesis (LAURA)
Prof. Macquet (ENT), Dr. Offeciers (ENT) and Prof. Peeters (UA)

1987

First implantation at St-Augustinus Hospital



CTC

- Largest R&D centre outside Australia
- 75 R&D staff

Expanding our research capacity

- Seeking co-funding is very important for our EU innovation hub.
 - additional budget, allowing to accelerate the research
 - allows us to engage in more risky, long-term projects
 - Strengthens/expands our research and technological partnership networks

• Regional

- Baekeland PhD mandates
- Research and Development grants (O&O)

AGENTSCHAP
INNOVEREN & ONDERNEMEN

• European programs

- AAL, Active Assisted Living Programme (*)
- H2020 FET-Open: BionicVest
- ITN networks: AUDIS, iCanHear, iCARE, TiNACT
- EID: MOSAICS (*)

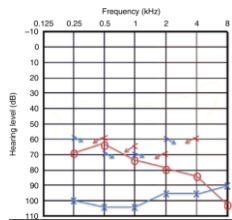


MOSAICS: Why large outcome variability with cochlear implants?

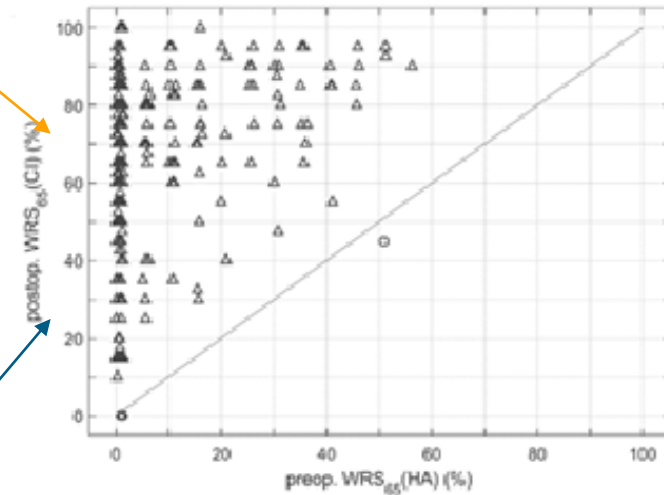
Sandra



Linda



0% CNC
speech test



MOSAICS

Hearing Matters
Minimizing Outcome Spread and
Maximizing Participation in Society

- Variability is a hard problem.
 - Basic science not well understood.
 - PhD formula is attractive
- Research topics
 1. Diagnostics (ear): Electrode neural interface
 2. Diagnostics (brain): cognitive factors
 3. Treatment: Fitting & Rehab
 4. Impact on Quality of Life

MOSAICS Project Overview



+ 1 043 000 euro – CTC and RUMC



3 years



4 PhD students



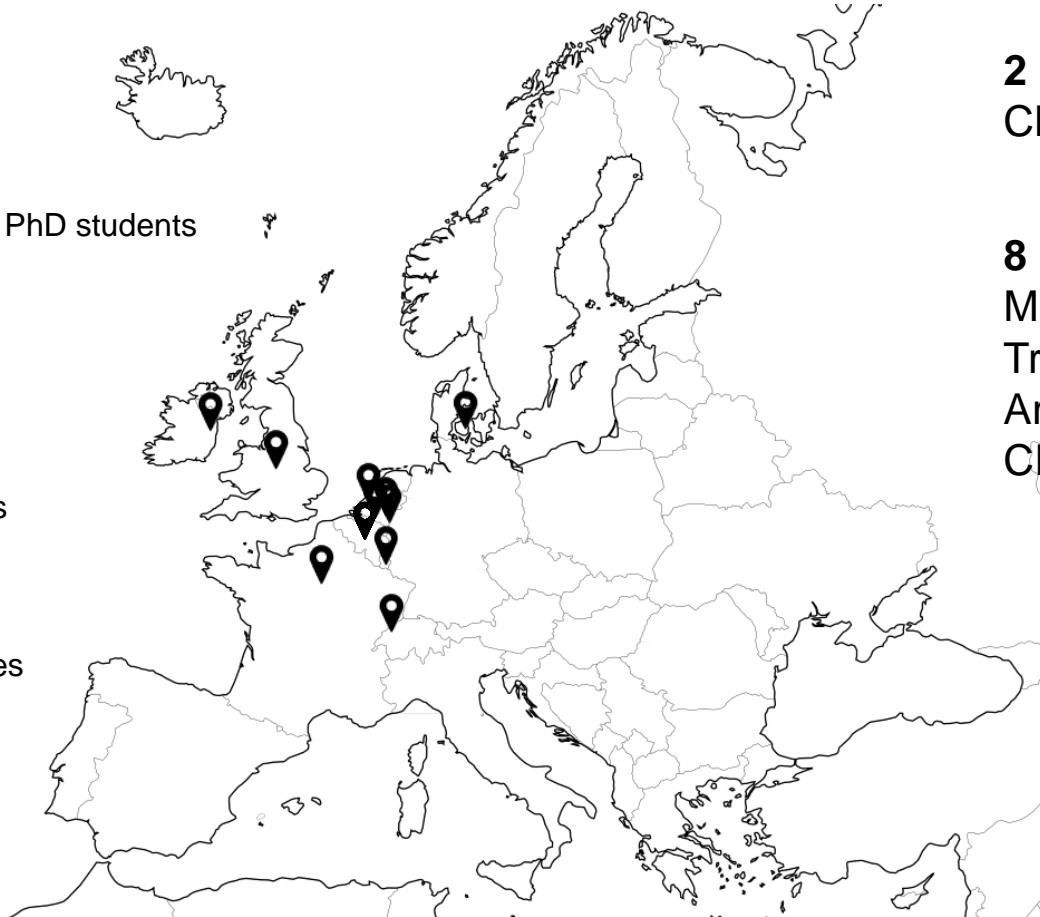
50% at CTC +
50% at RUMC



Secondments



Training
opportunities



2 beneficiaries
CBNV and RUMC

8 partner organizations
MHH, VU Amsterdam,
Trinity Dublin, Maastricht,
Artinis, Ida Institute, Euro-
CIU and Accelopment

**3 advisory board
members**
Dr Isabel Mosnier
Prof Angel Ramos
Dr Sue Archbold

MOSAICS Application Process



- We do not have dedicated staff for funding opportunities. We work with consultants.
 - Our research management team keeps a list of possible topics
- Programme selection
 - Consultant agency pointed us to the “European Industrial Doctorate” programme, with fairly high success rates.
- Grant application process
 - Co-design between COH research staff and consultant
 - > Cochlear: Scientific content, relevance, selection of partners
 - > Consultant: helped with definition of the training programme, engaging partners, budgets, EU administration
 - Started rather late (end of Nov), also due to availability of our partners in the network. Was an intense period

MOSAICS: the application document

| | | Score |
|---------------------------------|--|----------------------------|
| Excellence | <ul style="list-style-type: none">• Quality, innovative aspects and credibility of the research programme<ul style="list-style-type: none">• WP1, From cochlea to cortex• WP2, Brain, train, and sustain• Quality and innovative aspects of the training program<ul style="list-style-type: none">• Holistic approach, doctoral schools, secondments,... | 4.40/5.00 |
| Impact | <ul style="list-style-type: none">• Career opportunities for the ESRs• Strengthening the EU's innovation capacity• Dissemination | 5.00/5.00 |
| Quality & Efficiency | <ul style="list-style-type: none">• Consistency of the work plan | 4.80/5.00 |
| | 34 page dense document submitted on 16/Jan/19 | 93.20% (>70%) 15/May/19 |

- European Industrial Doctorates
 - Attractive formula for a corporate innovation lab seeking collaboration with knowledge centers
 - > Topics need to be long term, and suited for academic research
 - Relatively small projects, well funded, no big overhead
 - > In the end only 2 beneficiaries. We looked into adding more, but it was not advantageous in terms of the funding model.
 - > Doable to be project coordinator
- Working with a consultancy agency was beneficial
 - Application process could have been smoother... Fairly stressful. Start on time!
 - Value adding
 - > in the programme selection
 - > would not have gotten such a high score on the Impact and Quality & Effectiveness categories
 - They will take on a PM/admin role during the execution of the project



Cochlear®

Hear now. And always