



## NEUROCOM

HEARD BUT NOT SEEN? NEUROCOM SEES THE FUTURE OF IMPLANT TREATMENT FOR THE HEARING IMPAIRED AS... INVISIBLE

### AT A GLANCE

Neurocom aims to develop and commercialize the world's first cochlear implant (hearing prosthesis) implanted **invisibly and permanently** in persons suffering severe to profound hearing loss. Patient advantages include increased comfort, esthetics, and of course improved auditory quality. The implant's design calls upon the latest technologies associating surgically implanted energy sources via a rechargeable battery, and auditory neurostimulative techniques adaptable to complex environments via an implanted microphone.

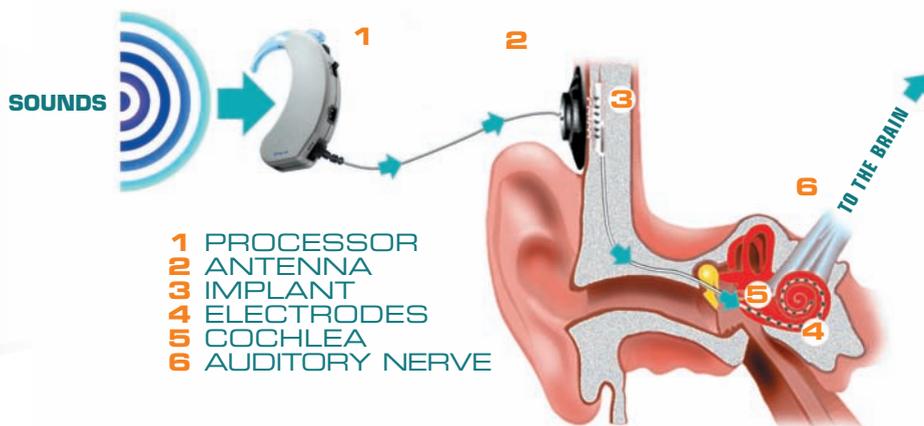
### BENEFITS

This cochlear implant is destined for child and adult usage. Its clear advantages are:

- an esthetic and practical comfort for the user: **the implant is invisible and efficient in all environments** (sport, aquatic, sleeping, etc.)
- a vastly improved auditory quality in noisy environments
- an enhanced social integration due to the increased autonomy of implanted rechargeable batteries

### THE APPLICATIONS

- Treatment of severe or profound hearing loss in children and adults
- Development of implants in the domain of neurostimulation (epilepsy, paraplegics...)



### SCS SYNERGY

To penetrate a market today wholly dominated by two companies (one Australian and the other American), only the unique synergy of academic and industrial partners made possible by a Cluster like SCS can generate the required success factors. These are:

- the acceleration of the R&D phase
- the association of NICT, microelectronics and medical competences
- the creation of an international commercial network.

### THE PLAYERS

Leader: MXM-Neurelec

Member companies: Sommepp, SORIN Group

Academics and Researchers: LIRMM, Laboratory of Otology and Micro-endoscopy IFR Jean Roche Mediterranean University, CHU Montpellier, INRIA Sophia Antipolis

## testimonials ●

"The realization of this type of invisible implant is a real technological leap. In time it could represent real progress for the treatment not only of the individual, but also of the societal implications of deafness."

*Olivier Le Caharec, director of R&D at Neurelec*

"The creation of a neurostimulation research platform will give French and European surgeons the capacity to develop totally new solutions perfectly suited to their patients' pathologies."

*Professor Magnan, PhD. in charge of the Laboratory of Otology and Micro-endoscopy, Marseille*

"For us, the Neurocom project is an opportunity for a transfer of R&D technology to permit a real technological breakthrough in the development of a truly high performance cochlear implant."

*David Guiraud, research director at the INRIA and the LIRMM, and DEMAR project leader*

## The technologies ●

The realization of a totally implanted cochlear implant, which is not yet in existence today, requires the prior development of:

- **an implantable, rechargeable battery,** providing onboard power management and RF module integration
- **an implantable microphone with development of adaptive multipolar stimulation** more closely resembling the physiology of the normal, non-impaired ear (patent pending)

## The markets ●

- Private and public sector hospitals and clinics
- Surgeons
- Health ministries

## The mission ●

To serve international markets including North America ● (subsequent to FDA, approval), Asia (notably China, India, and Pakistan) and the European market (CE certification will be sought for Europe)

To establish a neurostimulation research platform ● to broaden the therapeutic applications